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REPORT OF A SERIES OF ABDOMINAL CÆSAREAN SECTIONS

BY FREDERICK FENTON, M.D.

*Associate in Obstetrics, University of Toronto
Gynæcologist and Obstetrician to St. Michael's Hospital, Toronto*

THE cases which I am about to report constitute a consecutive series of abdominal Cæsarean sections from July, 1909, to the present time. I will make the report of each case as concise as I can and afterwards have a few remarks to make regarding the operation itself and its possibilities. I have omitted cases prior to the above date because the technique followed since then has been a marked improvement over that formerly used, and I felt justified in reporting this group in which the detail is the same throughout as affording a better basis from which to draw deductions than a mixed group of cases. For the same reason I have omitted vaginal Cæsarean sections altogether.

1. Mrs. A. F., III-para, two previous labours at term and one five and a half month miscarriage. A delicate little woman with external pelvic measurements two or three centimetres below the average. Both labours severe. First baby lived eight months; said not to have cried for a month after birth, and was thought at the time to have suffered injuries to head at birth. Second baby lived only one day and died suddenly; also because of birth injuries. Patient intensely desirous that baby should be safeguarded. Abdominal Cæsarean section done at term (July 19th, 1909), after test of labour for five hours with failure of head to engage. Baby weighed five pounds. Patient had attack of catarrhal

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jaundice with diarrhoea and a good deal of abdominal distension following operation, attended by moderate elevation of temperature, 100° to 101° , from third to eleventh day. This patient has since been delivered *per vaginam* of a four and a half pound baby (January, 1911), without assistance. Both of these children lived and thrived.

2. Nellie S., O-para, single, age nineteen years. Pelvic measurements: ant. interspinous, 21 cm., intercrystal 23 cm., external conjugate 17 cm., diagonal conjugate 10 cm. Head not engaged and cannot be pressed into brim even under a general anæsthetic. Effect of labour tried for six hours, but head still moveable above brim when abdominal Cæsarean section done. Baby weighed eight pounds. Living. Mother's convalescence uncomplicated. This patient is reported a second time under No. 23 in this paper.

3. Bridget C., married, age thirty-six, IX-para, labours normal. Admitted to hospital November 1st, 1909, with very severe hæmorrhage due to placenta prævia. Hæmorrhage ceased soon after admission, and being under seven months pregnant and a Catholic, it was urged that if possible we temporize till the child should be viable and deliver by section rather than by version, and thereby improve the chances of the infant. Patient kept strictly in bed and no further bleeding occurred for thirty-two days, when two or three ounces were lost early in the morning of December 3rd. As pre-arranged section was done at once, and a living, viable child secured. Child lived about three days. Blood examination: on admission r.b.c. 900,000, at operation 1,300,000, Hb. 30 per cent. Puerperium uneventful. Blood condition showed steady improvement, the red cells rising to 3,450,000 in seven weeks.

4. Rose G., married, II-para, on both occasions delivered by craniotomy. Rickety flat pelvis. Abdominal Cæsarean section at term (May 26th, 1910). Recovery uneventful. Baby eight pounds, living and well. This patient reported a second time under No. 21 in this paper.

5. Mrs. G., married, II-para, labours somewhat tedious but not regarded as abnormal. The first child lived one month and the second ten days. Both said to have died of some disease or malformation of bowel or bile ducts. When about eight months pregnant began to have painless bleeding from uterus which became more free from day to day until September 8th, 1910, two weeks before estimated date for confinement, it was judged unwise to allow it to proceed unchecked any longer. Rest in bed, morphia, etc., having failed, delivery was decided upon. The os was rigid,

and would not admit one finger. Abdominal Cæsarean section was performed, following a somewhat severe flooding five hours previously. Baby weighed nine and a quarter pounds, and recovery was uneventful but for abdominal distension, which was troublesome.

6. Mrs. B., October, 1910. (History mislaid, so that details cannot be given, but mother and baby both did well.)

7. Ethel R., single, twenty-three years, O-para, severe ante-partum hæmorrhage at term, not in labour, os rigid, central placenta prævia diagnosed. Abdominal Cæsarean section, October 24th, 1910. Baby six and a half pounds. Recovery uneventful. Diagnosis confirmed at operation.

8. Nellie G., coloured, married. Had been a prostitute formerly. Abdominal Cæsarean section done three years before by late Dr. J. F. W. Ross because of an almost complete atresia of vagina, due to scar following extensive injury. Patient admitted to St. Michael's Hospital, November 19th, 1910, in labour, and suffering great dyspnoea due to old mitral disease. Heart stimulants given and abdominal Cæsarean section proceeded with. Operation completed and patient back in bed in twenty-five minutes. There was some rise of temperature following operation which was never alarming, but the patient's circulation progressively failed and she died five days after operation. The abdominal and uterine wounds were in satisfactory condition. There were adhesions of omentum to both the abdominal and uterine wounds of first operation but nothing to give one any trouble. The baby weighed seven pounds and is living.

9. Sarah G., married, age thirty-two years, O-para, April 12th, 1911. Patient admitted to hospital at term, having been in labour for many hours, the vertex was presenting at pelvic brim in L.O.A. position, but had not properly engaged, and could not be pushed into brim. Membranes unruptured. Abdominal Cæsarean section. Recovery uneventful but for slight elevation of temperature reaching its highest, 100.3° on eighth day. Baby living.

10. Mrs. J. B., O-para, at term. Eclampsia, labour not commenced and os rigid. Abdominal Cæsarean section. Baby living, seven pounds. Recovery uneventful.

11. S. G., age thirty-two years, I-para, three days beyond estimated date. Previous labour difficult instrumental delivery, and dead baby. Admitted to hospital after some hours labour with head still at brim. Patient very anxious that baby's life

should be saved. No internal interference having occurred, abdominal section was at once proceeded with. Baby alive; weighed seven pounds, ten ounces. From sixth to eighth days temperature varied from 100° to 100·2°, otherwise convalescence uneventful. Mother and baby left hospital in two weeks.

12. R. B., age twenty, I-para. Former labour induced at term, difficult instrumental delivery. Baby lived two days and died from cerebral injuries. Patient allowed to go into labour, internal examinations being refrained from, and at the end of twelve hours head was not engaged in brim. Abdominal Cæsarean section done May 9th, 1911. Baby living, eight pounds. This patient had symptoms of toxæmia during last two weeks of pregnancy, but no albuminuria till after delivery. Convalescence uneventful. She is a small woman, five feet in height, and weighs ninety-five pounds. She is again pregnant, and will return for operation in July.

13. Rosa F., Italian, age twenty-six, I-para, admitted July 7th, 1911, being eight months pregnant, with very severe flooding. Placenta prævia centralis diagnosed. Abdominal Cæsarean section done as soon as preparations could be made. Baby living, weighed five pounds two ounces. Baby died in two days. Convalescence uneventful, though somewhat protracted owing to anæmia. This patient was delivered naturally in June, 1912, the baby presenting by the breech.

14. Margaret B., age twenty-two years, II-para. Both previous children delivered by embryotomy. Abdominal section at term, January 17th, 1912. Baby living, weighed eight and a half pounds. Both left hospital well on fourteenth day after operation.

15. Same patient as preceding, delivered by abdominal section, May 29th, 1913. Baby weighed seven pounds six ounces. Both left hospital well on twelfth day. There was scarcely any evidence internally of previous operation; no adhesions either to abdominal or uterine scars and no thinning of uterine wall at line of incision. At her request patient was sterilized by division and suture of tubes.

16. Maria C., primipara, three weeks beyond term. Pelvic measurements (external) slightly below average. Labour commenced March 28th, 1911, about 1 a.m., the membranes rupturing almost at once. At noon the cervix was still small and the head not engaged in spite of strong pains. Abdominal Cæsarean section at 2.30 p.m. Baby living, eight pounds, seven ounces. In this case rupture of the uterus was evidently imminent, the lower

uterine segment being found to be extremely thin and Bland's ring very marked. Rather free post-partum hæmorrhage requiring introduction of hand for purposes of compressing uterus, otherwise convalescence uneventful till the tenth day, when a high temperature developed which proved to be due to a mammary abscess. This proved very troublesome and patient was unable to leave hospital for two and a half months. Baby did well.

17. Jane D., age forty-two, XIV-para, having had two miscarriages at five and six months, respectively, and twelve confinements at full term. The record of her confinements is interesting. The first, second, third, eighth and tenth children were born alive and lived; the fourth was born alive but died shortly; the fifth, sixth, seventh, ninth and tenth were delivered by mutilation. The twelfth I delivered myself seven years previously with very great difficulty. It is still alive but cannot talk and shows other evidences of cerebral injuries. This woman is a very typical example of spondylolisthesis both in her obstetrical history and physical signs. She was delivered by abdominal Cæsarean section before the members of the Ontario Medical Association, at that time in session, on May 23rd, 1912, and she and her baby left the hospital well on the seventeenth day. Convalescence was somewhat disturbed by the occurrence of a pleurisy on the seventh day after operation.

18. Mary J. T., age twenty-nine, II-para. She is a rickitic dwarf, being four feet seven inches high, with well marked signs due to rickets both in her pelvis and elsewhere. Both previous children delivered by craniotomy. Abdominal Cæsarean section done at term May 30th, 1912. Baby living, nine pounds eleven ounces. Recovery uneventful, both leaving hospital well in two weeks.

19. Mrs. S., age twenty-seven, I-para. Had had two severe floodings on preceding day. Central placenta prævia diagnosed and demonstrated to be so at abdominal Cæsarean section on July 25th, 1912. The patient was not in labour and the os not readily dilatable. The baby was born alive and weighed seven pounds three ounces. There was a rather troublesome post-partum oozing requiring manual removal of clots from the lower uterine segment about ten hours after operation; convalescence otherwise uneventful. Patient was in bed for twelve days and left hospital with her baby on the sixteenth day.

20. Mrs. McL., age twenty-eight, I-para, strong, healthy woman with a normal pelvis. Previous labour two years before was

very long and severe owing to breech presentation and very large head. In this labour she had very extensive pelvic injuries involving cervix, vagina, perineum and rectum and the baby was dead. For a time her physician and friends feared that she would lose her reason, to such an extent did she fret over the loss of the child. It was not till about six weeks before the birth of the second child that she ceased making regular trips to the cemetery to put flowers on the grave of the child which had been born dead two years before. She insisted that no chances should be taken which might in any way lessen the probability of this child being delivered not only alive but uninjured. On palpating two weeks before the expected date of confinement I found the baby to be presenting as did the first one, viz., by the breech. There existed a distorted condition of the cervix which was said to have been present at the first labour and which was possibly due to a penetrating vaginal wound during childhood, and I felt that the prospects of success this time were not much better than on the first occasion and advised Cæsarean section. This was concurred in by Drs. Adam Wright and McIlwraith, of Toronto, and Dr. Chipman, of Montreal, and the operation done on November 23rd, 1911. Baby weighed nine pounds four ounces. Convalescence uneventful.

21. Rose G., III-para, this is same patient as reported above (Case 4). A second Cæsarean section (abdominal) was done on January 13th, 1913, being just under nineteen months since the previous operation. Some adhesions of omentum to abdominal wound and to uterine scar were found, but gave no trouble. At patient's request she was sterilized by dividing and suturing tubes. The baby weighed seven pounds, twelve ounces, and left the hospital with its mother in two weeks after operation. For a few days there was a good deal of trouble with abdominal distension but otherwise convalescence was uneventful.

22. Clara W., a little woman only four feet, eight inches in height and weighing seventy-five pounds, was admitted to hospital early in January last, and on routine examination was found to have a justo-minor pelvis with external measures: interspinous 20, intercrystal 22, and ext. conjugate 16 cm. Being a primipara she was allowed to go into labour, which commenced early in morning of January 30th. At the end of six hours the head was not engaged in spite of good contractions and it could be readily felt overlapping the brim of the pelvis. The membranes were unruptured, though at the operation I remarked on an unhealthy discoloured appearance of the membranes which covered the lower

pole of the uterus. Convalescence was very stormy, and six days after the section I opened Douglas' pouch with some apparent benefit, but the temperature still remained up and gave us much anxiety for nearly four weeks. Recovery eventually appeared to be complete, and the mother and baby are both well and thriving to-day.

23. Mrs. M., reported above, Case 2, as Nellie S. Abdominal Cæsarean section done for second time on May 2nd last, at term. No adhesion found and uterine scar scarcely noticeable. At patient's request tubes cut and sutured. Baby weighed six pounds eight ounces. Living. Convalescence uneventful. Stay in hospital fourteen days.

24. Maud H., married, I-para. First confinement took place just one year before Cæsarean section which was on January 12th last. Her labour proceeded apparently quite normally until the outlet was reached, when progress ceased and difficulties presented themselves. I was called to deliver her and did so after a very difficult time with forceps. The outlet was so narrow that it was with difficulty that one's hand could be passed between the bones (6 cm.). The baby was finally delivered alive but with many evidences of both extra- and intra-cranial injuries from which it died in convulsions about a week later. The first baby which was lost weighed nine pounds, ten ounces, and the one delivered by section, nine pounds, four ounces. Convalescence uneventful. Stay in hospital sixteen days.

25. Pearl H., abdominal section at eight months for accidental hæmorrhage with a rigid os and living child, on November 22nd, 1912. Patient left hospital in three weeks, but the baby only lived a few hours.

26. Mrs. B., age twenty-seven. Two miscarriages at about five months. On routine examination pelvis found to be much below average, interspinous 21 cm., intercrystal 23 cm., and ext. conj. 16 cm., diagonal conj. 10 cm., from which true conj. was estimated as about 8 cm. Being her first labour at term she was allowed to go into labour, and after a test of four hours good pains, the head not having engaged in the brim, a Cæsarean section was done. Baby six pounds, nine ounces. Convalescence uneventful.

Of the twenty-six operations, sixteen were done because of obstruction to delivery owing to contractions in the bony pelvis; six were done on account of ante-partum hæmorrhage with undilated os; and one each for eclampsia at term, large baby, and stenosis

of soft tissues; one case is unclassified owing to loss of history.

Five cases were second operations on the same patient and two patients have subsequently delivered themselves unaided.

All of the children were delivered alive and all but three left the hospital in good condition. The three who died doing so during the first two or three days from prematurity.

One mother died, but it might fairly be claimed that her death was not due to operation.

All of the cases might be classed as primary operations in that they were either done before the membranes had ruptured or before any attempts had been made *per vaginam* at delivery, or more than one or two vaginal examinations made and those under the strictest precautions.

The operations were performed in various places, one being in the Toronto General Hospital, one in the Western Hospital, one in the Cottage Hospital, one in a private house and the balance in St. Michael's Hospital.

The Operation. The technique of operation has been the same throughout this series and consisted of the following steps:

(a) Sterilization of the skin by thorough scrubbing with soap and water, followed by alcohol and bichloride of mercury or tincture of iodine.

(b) The incision was very rarely more and often less than four inches in length. The place selected for it was about an inch to the right of the middle line, with the centre of the wound opposite the umbilicus. Intestines were never encountered in opening the abdomen, and omentum on only two or three occasions where it was adherent to the line of scar of a previous operation.

(c) The uterus was opened *in situ* and the child delivered by grasping a leg, no attempt being made at hæmostasis until the placenta and membranes had been removed. The finding of the placenta attached directly under the line of incision was of frequent occurrence, but gave no trouble. The hand was simply pushed through it or around it, as seemed best, but without any delay, and child and placenta removed together usually under such circumstances.

(d) As soon as the placenta and membranes were removed the uterus was grasped and delivered through the abdominal wound. The first assistant immediately applied his palms to the sides of the uterus, compressing it firmly in such a way as to evert the cut surfaces, thus rendering the introduction of sutures easy,

but what is perhaps of greater importance, stopping the bleeding from the uterine wound and obliterating the uterine cavity and maintaining such obliteration until such time as the firm contractions of the uterus had made such compression no longer necessary. By this means the formation of clot within the uterine cavity is prevented and much discomfort saved. Latterly I have been in the habit of giving 15 minims of pituitrin hypodermically as soon as the child is delivered, and have by this means induced contraction of the uterus in a very few minutes and shortened greatly the time necessary to keep the uterus compressed, much to the relief of the assistant whose duty in that respect not infrequently became very exhausting.

(e) Three rows of sutures were used in the uterine wound, all being of No. 2, ten day, chromic catgut. The first was a continuous suture embracing the inner half of the muscle only. The second were interrupted sutures securing the outer half of the muscular coat and emerging on the peritoneal surface. The final set approximated the peritoneal edges, where necessary, and were also interrupted. By the time the sutures were in place the uterus almost invariably was firmly contracted, and where pituitrin was used the contraction occurred earlier and was more effective.

(f) The uterus was then returned to the abdominal cavity, blood and liquor amnii, if such had entered, sponged out, and the abdominal wall closed in layers as is customary with other abdominal operations.

I do not rupture the membranes before opening the uterus nor do I, as a rule, dilate the cervix. On only one occasion was any dilatation of the cervix done, and in that case it would not admit one finger and I was a little afraid of blood being forced through the uterine wound in the event of clot forming in the uterine cavity, and strong contractions occurring in the effort to expel the clot. There has been a good deal of discomfort in a number of the cases from abdominal distension but this was usually over in twenty-four hours. Otherwise the patients expressed themselves as being comfortable, were able to take nourishment freely, being usually on full diet by the fourth day. Stitches were removed by the eighth or ninth day and most patients were out of bed on the twelfth day and able to go home in a very few days after getting up.

There are just a few remarks that I would like to make about one or two groups of cases. First as regard pelvic contraction. It may be remarked that I have not gone much into detailed report of pelvic measurements. It is not that I do not

use the pelvimeter and value its findings, but I am more and more using it mainly as a means in routine examination of detecting those cases which may have deformed pelves and indicating with what cases to be especially on my guard. As soon as one commences to lay down definite rules for procedure based upon the true conjugate or any other diameter of the pelvic brim or outlet, then, I think, its usefulness is in a fair way to be lost and it may be the means of leading one into trouble. By far the best internal pelvimeter is the head of the child that has to pass through that pelvis. If the head will pass through the pelvis what difference what contraction exists? And on the other hand, if it cannot do so without serious injury the most convincing demonstration that the pelvis is ample for an average child will not assist very much in the delivery. In badly deformed pelves it is a simple matter to decide upon a course of action but in the slightly contracted cases it is not so easy. The woman's previous obstetric history is a very important factor in arriving at a decision, but even here, and in all primiparæ in this class, I always feel that labour should be given a fair trial with the exercise of strict precautions against the introduction of sepsis before proceeding to operation. On more than one occasion I have been surprised at the facility with which a woman succeeded in delivering a child through a pelvis which without doubt was not a little below the average in point of size.

In regard to the cases of ante-partum hæmorrhage I wish to say that I think there is a place for Cæsarean section in their management. Given a primipara at or near term with a placenta prævia, the patient not being in labour or the cervix readily dilatable, I am convinced that the mother's risk can be greatly reduced and the baby's life all but guaranteed by section, whereas by other procedures the chances for the child are small and dangers to the mother very considerable. The success attendant upon repeated sections on the same patient and the safe passage through a subsequent normal confinement of other cases, serve to demonstrate that there is not much to be feared from the supposed weakening of the uterine wall, and justify us in proceeding by this method where such seems to offer the best chance for mother and child, without much fear of complications arising as a result of the operation during a subsequent pregnancy or labour, where conditions may be different and not such as to preclude delivery by the vagina.

A NEW AND RATIONAL METHOD FOR THE STUDY OF THE FUNCTIONAL DISEASES OF THE NERVOUS SYSTEM

BY GOLDWIN W. HOWLAND, M.D., M.R.C.P.,

*Physician to the Outdoor Department for Nervous Diseases, Toronto
General Hospital*

DURING the period of time that I have been teaching medicine, there is a fact that has always impressed me and which becomes more and more apparent as experience grows wider, and that is, that the terms neurasthenia and hysteria as denoting certain functional diseases of the nervous system have outlasted their usefulness, and are now a source of error in diagnosis and a block to the further knowledge of the causes of nervous disease, and to the recognition of the finer functions of the nervous system. It is my object to prove this contention, namely, that the terms neurasthenia and hysteria should be relegated to the history of disease, and to briefly show you in what direction it is advisable to advance our methods of study of functional nervous disturbances. In the first place I shall urge that the present study of these so-called diseases is largely in a wrong direction, and is leading to the production of sub-classes that are misleading and are not along the lines that lead to advance in our scientific knowledge.

In the earlier study of diseases the natural method of research has been to collect together groups of symptoms, common probably to many different diseases, a method which may be termed generalization, while later in the advance of knowledge these symptoms become recognized as distinct disturbances of function, which are either found to be characteristic of definite pathological conditions, or the pathological change may not be arrived at, being a temporary or simple metabolic change. The completion of our knowledge is attained when there is found, in addition to the morbid functional and anatomical conditions, the actual cause producing them, in which case we have succeeded in the isolation of a definite disease.

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For instance, take the diseases "arthritis," originally a great group of joint diseases with certain characteristic general signs—swelling, pain, tenderness and so on. As knowledge grew these general signs were discovered to be due to disturbances of function of definite anatomical structures, for instance, of the synovial membrane or the cartilage or the bone. Having reached this stage of discovery our scientific energies are directed now in the pursuit of the causes, and we are gradually separating infectious arthritides from one another and from metabolic arthritides of various forms, e.g., notice the late discussion in the *British Medical Journal* between Sir James Barr and Dr. Luff. So also in lung diseases with hæmorrhage, expectoration, and dyspnœa, these were found to be disturbances of function occurring in different anatomical regions of the respiratory system, and these functional disturbances were gradually allied to pathological changes. But it was only when we reached the cause that the diseases were finally and definitely separated the one from the other.

But when we turn to neurasthenia and hysteria, we find that science has not followed the same natural method of advance, and instead of gradually reaching the true termination and dividing these diseases according to their causes, the tendency has been to widen the enormous field which these terms include, either by separating from them other classes such as psychasthenia, based on a similar collection of general symptoms, or by subdividing the functional diseases and forming classes such as cerebrasthenia and somatasthenia, sexual neurasthenia, etc. Such subdivisions are not the result of an attempt to make cause the basis for the separation, for you will at once realize that sexual neurasthenia is by no means caused by sexual conditions alone, nor gastric neurasthenia by stomach malfunctioning. These subdivisions are simply the extension of the plan of collection, generalizing into diseases, and then separating such into groups arranged according to disturbances of similar functions.

Yet let me recall the fact that Sigismund Freud has evidently tried to avoid this unsatisfactory method. He has isolated anxiety neuroses and masturbation neurasthenia from the group, truly a division based on cause, but unfortunately one whose value is limited, as he has obtained such a small number of groups based on cause for such a great disease as neurasthenia. With hysteria the length of its scientific life has evidently placed the disease beyond any attempt at a similar recovery.

Sufficient stress cannot be laid upon this point. The functional

disturbances of the nervous system must be separated into diseases classed according to *cause*, not on the present basis of calling a collection of symptoms a disease. So that in advising the relegation of neurasthenia and hysteria into the field of obscurity I do so in the first place because the natural method of advance is, firstly, the collection of symptoms and their separation according to specialized function; secondly, the determination to see if a general nervous function is at fault. I refer here to such general conditions as irritability, tone and so on; thirdly, when possible the association of such functional derangements in specialized centres to pathological conditions be they gross or minute; and finally, and always most important, the discovery of the cause. Never stop short of this supreme object of finding the cause for the functional derangement complained of by your patient.

While discussing this feature of the ultimate division of all diseases under the cause, another great class of diseases comes into view, I refer to the insanities; a group that should not be separated either in text-books or in teaching from the nervous diseases. Why should alcoholism be placed under mental disorders for psychical symptoms and under nervous disorders for neuritis; and consider also similar absurd cases, namely, where toxic conditions affect the brain and spinal cord; cerebral diplegia with mental or nervous symptoms; epilepsy and epileptic insanity, and so on; perhaps I might even suggest general paralysis and tabes. There can be no separation between psychical and nervous disorders except on the basis of disturbances of specialized functions.

These mental disorders are practically in the same class as the functional nervous disorders, they are nearly all divided according to the groups of symptoms; "manic depressive insanity," "dementia præcox"; and there is no true scientific cure, all are treated by symptoms, and there will be no success till the causes are differentiated. Let me add, the mental men are working along that line. Recently one writer has claimed the cause of dementia præcox to be due to particles of the sexual glands in the blood. The trend is in the direction I point to, although there is little effort being made to delimitate the physiological disturbances according to general function.

The second reason for laying aside the diagnosis of neurasthenia and hysteria is that one is turned aside from a great opportunity for studying and differentiating the diverse functions of the nervous system. If one collects the symptoms which fall into a specific functional group of the nervous system—and by these specific

groups I refer to motor, sensory, vasomotor and such visceral groups as the sexual, genital, respiratory, cardiac and so on—take, I repeat, all the signs found of malfunctioning in such a group; collecting them from all cases of functional nervous disease, and you will find that you have many different types of general functional disturbance of the nerve cells, conditions of increased irritability and of diminished irritability, of loss of tone, of involuntary action, and of sub-voluntary action, besides other conditions which I shall not refer to.

You will find on taking up other groups that a parallelity of general functional disturbance runs through group after group, and studying them, not only is your knowledge of the functions of the nervous system wonderfully broadened, and not only does one recognize the similarity of action throughout the nervous system in a most interesting manner, but also on the other hand one recognizes that this is one method by which we shall approach the desired issue of localizing new functions and associating the same with groups of nerve cells which at present have no defined action. For instance, take the interesting work that Kinnier Wilson has lately done, showing that organic disease affecting the lenticular nucleus leads to a certain form of tremor. We shall be able by this new method, I believe, to determine also the seat of many conditions now termed under the fullness of our ignorance hysterical or functional.

In the third place, in the teaching of students by the present method we find that they begin to look on neurasthenia and hysteria as a token for all that is uninteresting in medicine. As a type of case which has nothing tangible behind it. But if you commence teaching disturbance of function, you give the men some definite problem to work out, and you show them the necessity of arriving at a cause, and you have men keen and interested in the various cases they previously scoffed at.

The fourth reason for my urging this change in procedure is an important one, it is to avoid mistake in diagnosis. In my experience the worst mistakes that I have come across have always been in diagnosing as neurasthenia and hysteria diseases that were of a most serious nature; and the cause for this has been that where you have a group of symptoms such as neurasthenia covers, a group, I repeat, which frequently precedes the onset of more advanced signs of other diseases, and which the physician is inclined to use as a diagnosis to save him the attempt to find a cause, in these cases the most terrible mistakes occur. Let me emphasize this by giving a few that I have lately come across.

CASE 1. A lady, sixty years of age, treated for one year for neurasthenia, seen by one of the most celebrated London, England, consultants, and again diagnosed as the same disorder. Three days afterwards examined by a nose and throat specialist and cancer of the œsophagus found.

CASE 2. A woman of forty years, seen by a nose and throat specialist, diagnosed neurasthenia, treated as such by myself for six months and returned to nose and throat specialist who found cancer of the œsophagus.

CASE 3. A man of forty years, treated for neurasthenia by well-known physicians. X-ray examination showed large mass in region of œsophagus, from which he died.

CASE 4. A woman, forty-eight years, with the general signs of neurasthenia for some ten years, undergoing several rest cures, examination showed gummata on legs, Wassermann reaction positive.

CASE 5. A girl, thirty years of age, gradual onset headache, tiredness, general pains, diagnosed as neurasthenia, given careful examination by most intelligent physicians; died in three weeks of meningitis which could have been diagnosed if spinal fluid had been examined.

CASE 6. Lady of fifty-two, with what are called typical symptoms of neurasthenia, treated as such for a year. Serious signs finally developed and she died from bulbar paralysis.

CASE 7. A woman, thirty-eight, in a large hospital for three weeks, diagnosed as neurasthenia of typical nature, whom I was called to see a week after she left the hospital. Pelvic examination showed mass in pelvis, later proven to be tuberculous.

As to cases of toxæmia, early typhoid, general paresis, arteriosclerosis, and many other similar conditions, the mistakes made in these directions are as frequent as they are unfortunate. And yet if the intention in all these cases had been to consider the symptoms complained of as disorders of function, then I believe that in the more careful search for the cause which would naturally be demanded to complete the diagnosis, few if any would have reached so hapless a conclusion.

The fifth error that impresses me, is that in using the terms hysteria and neurasthenia, the doctor regards them as if they were definite diseases, and normal for a definite type of individual. Now while there are unfortunates who exhibit the characteristic disturbances that have been isolated through the study of hysteria and neurasthenia, and exhibit them from the time of birth, forming

the congenital cases, yet it is equally true that individuals who are absolutely normal may at some period of their lives through some cause, be it toxic, psychic, or metabolic, temporarily develop the definite functional disturbances covered by these terms. Ordinary hysterical convulsions are common in practice. Nervous asthma, pelvic attacks of nervous origin, cardiac conditions, forms of tremors, and many other line conditions are frequently observed, yet the individuals suffering from them have always been normal persons, mentally and nervously, before some unusual cause produced the extreme condition for which you were called to see them.

Again, let me urge in the sixth place, that in these diseases the typical, functional disturbances which they include are not necessarily present in the same individual. The nervous irritability and the nervous exhaustion of neurasthenia are frequently combined as, also in gastric conditions you may have a combination of hypersecretion and hypermotility; but over and over again patients are seen in whom irritability is the only function affected, while in others exhaustion in some specialized function may be present, quite apart from any disturbance of the nature of irritability.

Lastly, in the seventh place, note that the individual you at one time termed hysterical, may at another give you symptoms typical of neurasthenia. I judge you have noticed how much more commonly the defects covered by the name of hysteria are found in youth, while as age advances one is much more likely to meet conditions characteristic of neurasthenia.

In conclusion, I should like to say that having given my objections, and I consider they are strong and well-balanced, it is natural for you to ask what is the remedy. This opens up at once the subject of what are the general functions of the nervous system, and I use the term *general* to separate such conditions as irritability, tone, involuntary action, and so on, conditions, which are common to every nerve cell, from specialized functions such as motor, sensory, etc., which are the property of certain nerve cells in definite anatomical regions. Let me say that I intend to bring this subject of the remedy before you at a subsequent meeting, but I should like to say that so far in my work I have found a wonderful change in the interest which I and my students take in working from this new basis. I feel satisfied that this method is the correct one and regret that time will not allow me to enter on such a large subject now.

I finish by claiming that I have put forward a strong case for my plea that the terms neurasthenia and hysteria should not be

used as diagnostic conclusions but should be entirely omitted, and that the time has come for reviving the study of the general functional disturbances of the nervous system, using the vast material which we have acquired: we should also endeavour to make more definite research into the specific difference of function belonging to nerve cell groups in different parts of the nervous system, and there should be further advances made in associating these functional disturbances with chemical and physical changes in the nerve cells themselves. And finally, and most important of all, we should decide only to classify our functional nervous diseases according to CAUSE.

It is probable that a by-law will be submitted to the rate-payers of Winnipeg in December, to grant \$275,000 to the Winnipeg General Hospital. Extensive additions to the hospital have been made recently and the cost has been greater than was estimated. \$605,000 have been expended on the main buildings, \$54,000 on a nurses' home, and \$14,000 on a residence for the medical superintendent. About \$450,000 has been received already by the board, but there exists also a mortgage of \$60,000 so that a sum not less than \$275,000 is required to pay off existing liabilities. A good many of the patients treated in the hospital come from points outside Winnipeg, and it is suggested that the provincial government might very properly give some further assistance.

THE TREATMENT OF TUBERCULAR SPONDYLITIS OR POTT'S DISEASE

BY W. G. TURNER, M.D.

Surgeon in charge of Orthopedics, Royal Victoria Hospital, Montreal

FOR many years, and in fact in certain quarters up to date, the treatment of Pott's disease has been carried out in a more or less perfunctory way either by a varying period of rest in bed on a hard plane or by means of plaster corsets or braces. The early diagnosis has been a matter of speculation and especially the progress and pathological condition present. One must confess, also, that there has been considerable neglect in the attention paid to the region affected; that is to say, especially in the cervical and upper dorsal. Variations must also be made as to the age of the patient, whether infantile, juvenile or adult.

Before going farther it will be absolutely necessary to briefly review some of the pathology of the question.

PATHOLOGY: I will just briefly mention some points of advance in this branch. Owing to the work of Brackett¹ we have some clue to those puzzling cases of Pott's disease with early paraplegia. From a study of a number of specimens he draws attention to the fact that, whereas in the greater number of cases the involvement is towards the anterior part of the vertebral body and gradual extension of the disease is above, below, and backwards, until the gradual collapse of the front vertebral column produces the hump clearly recognized; yet in a certain percentage of cases the primary focus is to the centre of the body of the vertebra, or farther back. When this occurs, combined with the extension backwards, quite a different condition results. Here the vertebral column has a solid column of bone up the front composed of the intact part of the anterior portion of the bodies; posteriorly a corresponding buttress composed of laminae, spinous processes and ligaments. This almost preserves the symmetry of the column and causes the clinical condition of "straight back." The deceptive factor is that in a certain number of cases the disease progresses backwards and early invades the neural canal with the resulting complication of paraplegia.

In a large number of cases the caries progresses as such, with the production of granulation tissue and a small quantity of cold abscess pus. When this latter is in greater amount the progress of the cold abscess is along the path of least resistance; thus, in the cervical region a retropharyngeal abscess must always be sought. In the dorsal region the diagnosis of this extension is much more difficult, as here it is frequently concealed in that silent area of the posterior mediastinum. The dorso-lumbar and lumbar region are much more accessible for examination, and the well-known psoas abscess follows one of two courses: palpable in the lumbar region just above the anterior superior spine and thence through the crural canal to Scarpa's triangle; or it descends into the pelvis, emerges through the great sciatic notch to be palpable under the gluteal muscles.

In the different regions the treatment must be very much modified. Thus the cervical region presents the support of the diseased vertebræ, plus the weight of the head; from the seventh cervical to the seventh dorsal vertebræ the problem is the difficulty of support, as here there is the weight of the head and the forward give of the shoulders increasing the tendency to the hump deformity. The dorso-lumbar and lumbar regions are more amenable to treatment or fixation, as in them the support is built up from a solid pelvic base and embraces firmly the parts above and below the disease.

TREATMENT OF THE LESION: In infantile cases, up to the age of six to eight years, our regular method has been that advocated some years ago by Lorenz and emphasized so much by Finck,² of Cracow, in 1905. This applies whether the lesion be cervical, dorsal, or lumbar. The child is laid face downwards on the table; a layer of sheet wadding half an inch thick is then placed on the patient, a plaster mould is then carefully constructed by overlaying layer after layer of plaster of Paris bandage from the top of the head to the cleft of the nates. This is carefully moulded around head, back of neck and back, and reinforced wherever any weakness is found. As the plaster is setting the child's legs are held up in order to hyper-extend the spine. As soon as the plaster has set the mould is removed, trimmed, any roughness smoothed off and then carefully padded. It is well trimmed down opposite the arms and neck. This gives an accurate mould of the patient, and a strap over the head and one over the body prevent any licence being taken. Every morning and evening the patient is rolled over on its face, the mould removed, the back and head carefully sponged, and the

mould replaced. This is what constitutes the well-known "liegen bett" of the German clinics. In case of soiling the lower portion can be covered by waterproof material. This allows any transportation of the patient with the greatest comfort and we know of no contraindication for its use.

After the above age we are face to face with the ambulatory or recumbent question. Certain cervical cases, dorsal below the level of the eighth dorsal vertebra, and lumbar cases, when carefully selected, may be treated by the ambulatory method. Nerve pressure, cord pressure, progressive abscess formation, increasing deformity, the signs of toxic absorption, are the contraindications.

As a working basis in the course of treatment it is wise to consider the condition as a focus of tuberculosis with local and constitutional signs. Thus we find a certain analogy between pulmonary tuberculosis and the treatment of tuberculous spondylitis, or in fact surgical tuberculosis. For this purpose it has been our custom in the Orthopedic Clinic at the Royal Victoria Hospital to take those two sets of observations, commonly called the double sextette. They are all familiar to you but I will just tabulate them:

GENERAL

1. Anæmia.
2. Anorexia.
3. Plus pulse.
4. Loss of weight.
5. Evening temperature.
6. Sweats.

LOCAL

1. Pain, local and referred.
2. Tenderness, local.
3. Rigidity.
4. Deformity.
5. Abscess.
6. Nerve pressure.

If these local signs are combined with general signs there is only one treatment to follow—absolute rest with fixation and approximate hygiene. In fact, throughout your treatment these two groups go hand in hand in the direction of your case. This *régime* was first suggested to us after some visits to Saranac Lake. Our fixation is almost uniformly the plaster of Paris jacket or the "liegen bett." Months after all signs have disappeared we allow a Taylor brace.

Guided by the above double sextette of signs, careful treatment is followed until one year after all signs have disappeared, and the back is protected by a brace for one year after that time. I may say that in the clinic a number of the patients are wage earners as long as there is progressive improvement, and they must

report at regular intervals, supplemented by a home visit at intervals by a nurse. The cervical and upper dorsal cases are extremely difficult to treat and it is surprising how even with the greatest care deformity progresses. This appears especially so between the ages of eight and fifteen, as the patients at that era are difficult to dominate.

When fixed rigid deformity is present hyper-extension is of value in only a small percentage of cases. Our custom has been to have all patients wear shoulder straps to hold them well back against the back of the jacket. This is not essential in recumbency.

Before going on to the main subject of this paper—the radical treatment—it would be wise to briefly review the *treatment of the complications*.

The gravest of these probably is *paraplegia*, or spinal cord pressure. What causes this? A review of museum specimens is of decided value. The Royal College of Surgeons, London,³ has between twenty and thirty good specimens of the condition. In only one, No. 2,070, is there marked narrowing of the neural canal, and this was caused by a small triangular sequestrum. There was moderate sensory disturbance in this case, no motor. In St. Thomas's Hospital there were ten specimens, with no sequestra and no spinal narrowing of the canal. Guy's Hospital had two specimens showing rectangular deformity, no sequestrum but the canal was smaller than normal. In the Berlin Museum there were few Pott's specimens and the Dupuytren Museum in Paris shows the same results as the Royal College Museum.

The autopsy records of the above mentioned institution, and the findings in the Boston City, Massachusetts General, and our own hospital, point out conclusively that the most probable cause is the intrusion of a mass of granulation tissue in the canal, occasionally cold abscess, rarely bone sequestrum, and rarely penetrating of cold abscess or granulation through the dura.

The pressure signs vary from slight motor disturbance to complete paralysis to the level of the lesion. Sensory impairment is less marked. As is mentioned in the pathological remarks, at times there is rapid spinal cord involvement with little deformity. The most marked case in our own clinic was that of a girl, aged seventeen, who had absolute paraplegia to the level of the sixth dorsal vertebra. Her history stated positively that this condition dated eight to nine weeks from the time when pain was first noted.

Fixation, absolute rest in recumbency and hygienic *régime*,

are the rule. Prolonged suspension has proved a failure. As to laminectomy, Menne's figures⁴ show that of one hundred and thirty-two cases 56 per cent. were cured or improved, and 18 per cent. temporarily improved. The above *régime* should be continued until and beyond the time when pressure signs have disappeared. It is rare that treatment does not produce results. Nerve pressure is treated in the same manner.

Never hurry to invade a cold abscess. When this is prominent, puncture, but if in the abdominal area, this should be done through open incision. Three years ago when operating thus on a patient a flap of peritoneum was found to extend for nearly two inches over the prominence of the abscess. Closure should be complete and in two or three layers.

Toxic absorption, fever, and rapid pulse must be counteracted by absolute rest.

Our present treatment of the lesion is gradually taking two definite lines, the conservative and the radical.

Our present radical treatment is a great advance. Two years ago Hibbs, of New York,⁵ began his work on an ingenious plastic operation of taking periosteal flaps from the spinous processes, turning them up and down, and thus fixing the spine. His cases, which I saw collected some months later, contained some splendid results. In March, 1912, Albee,⁶ of New York published his first paper demonstrating his method of transplanting a bone splint from the crest of the tibia into the vertebral column. I have seen a number of his cases and some dog cases, and was much impressed with the value of the operation.

The suggestion of this method of treatment followed a paper by Lange,⁷ of Munich, at the May, 1910, Congress, on the treatment of tubercular spondylitis by means of buried steel rods on each side of the spinous processes, and a paper by Brackett¹ reviewing the attempts of nature to heal these cases. The material was from the rich supply of the Warren Museum, Harvard University. The specimens show that a firm, bony bridge had been thrown out ankylosing the spinous processes, though there was no caries at that site. In other words, given a solid posterior bridge there will be no crushing forward on the diseased vertebræ, rest is assured for the diseased area and healing is rapid and complete.

It is needless here to enter into the discussion of the fate of the bone graft, but mention must be made of the two camps. Macemen, Kausch, Marchand, and others, maintain that the implanted bone persists and lives as such. Murphy, Skeeda, and

others, hold that it merely becomes a scaffold for the formation of new bone along the same. In any case a permanent supporting bone splint is obtained. In one of our own cases an x-ray picture ten days after operation showed a faint shadow of the graft, where four weeks later there was a dense shadow

"With the patient in the ventral position, the spinous processes are reached by a curved incision to one side and the turning up of a skin flap. Care is taken not to incise the supraspinous ligament (which is the prolongation of the ligamentum nuchæ) to one side. Then with a scalpel the cartilaginous tips of the spinous processes are split in centre, also the above-mentioned supraspinous ligament, leaving each part of it attached to the halves of the spinous processes. The interspinous ligaments are split into equal parts to a depth of about three-quarters of an inch, without disturbing their attachments to the spinous process. Very little hæmorrhage results, because only dense ligamentous tissues have been incised; which is in considerable contrast to the hæmorrhage resulting from the separation of the muscles from the spinous processes in a deeper operation, such as a laminectomy. With a chisel and mallet each process is split longitudinally into equal parts for a depth of about three-quarters of an inch, care being taken that green-stick fractures are produced on one and the same side of all the spinous processes. A separation of the tips of the halves of each spinous process produces a wedge-shaped cavity, into which the prismatic shaped transplant is later placed. It is important that the spinous processes be split *in situ* with all the ligamentous and muscular insertions undisturbed, as in this way none of the natural supports of the spine are taken away, and the ligaments afford, by means of strong ligatures, an excellent medium for firmly fixing the bone splint in place. A hot saline pack is placed over the back wound until the bone insert is obtained. With the patient still in the ventral position, the leg is flexed on the thigh and an incision over and down to the crest of the tibia is made. The fascia and subcutaneous tissues are carefully separated from the periosteum of the anterior—internal flat surface of the tibia. With a sand bag in the popliteal space and behind the leg a prismatic-shaped piece of the tibia is removed with a sharp chisel. A motor saw also affords a very rapid and exact method of securing the graft, and this we have found of decided value in our own cases. The length of graft varies according to how many vertebræ are to be spanned, its breadth from two-thirds to three-quarters of an inch, according to the size of the patient; its thickness, from one-third

to one-half for the same reason. The longest graft in our cases at the Royal Victoria Hospital was 16 cm. All diseased vertebrae and one healthy one on each side should be included within the insert. The graft is inserted between the halves of the interspinous ligaments and the spinous processes with its edge anterior or innermost. It is held firmly in position by interrupted sutures of heavy or medium kangaroo tendon or catgut, which are passed through the supraspinous ligament and the posterior edge of the half of the interspinous ligament on either side near the tip of a spinous process. The suture is brought over the graft posteriorly and into the same ligaments on its other side. The ligaments are then drawn over the insert posteriorly by tense sutures, placed together. If there is a moderate kyphosis of short duration, it is entirely obliterated, any kyphosis of a few years or less duration becomes much diminished either at the time of operation or the first few weeks after or both (Albee⁸).

In three instances tuberculosis tissue, with cold abscess formation, was entered in the region of the spinous processes. The grafts were inserted as usual and primary union resulted in each case. In several of the later cases where a kyphosis too old or too great to be entirely corrected has existed and it has been impossible on account of the angulation of the spine to secure a straight splint properly, in place of the spinous processes a very broad bone splint has been taken (in some instances the complete width of the tibia) then moulded with a sharp rongeur bone forceps, into the segment of a circle. The graft, however, is always straighter than the kyphosis, and the spine is straightened and drawn to the bone splint by means of the heavy ligatures. When the deformity has been too great, even for this method, the graft has been placed with its wider diameter in a lateral rather than antero-posterior plane, and then bent into place between the halves of the spinous processes and held with heavy kangaroo tendon as above indicated.

This has been accomplished successfully in children where grafts of the following dimensions were used, $4\frac{1}{2}$ by $\frac{3}{8}$ by $\frac{1}{4}$ inch. In later cases of all ages, especially adults, where it is necessary to bend the graft, it has been found preferable to saw one half the way through it on what is to be its concave side four to eight times, at the place where it is to be bent (as the carpenter does when he bends a board). The distance between these saw cuts has varied according to the size of the graft, from one-eighth to three-quarters of an inch. The transplants have varied in size from four to seven and one-half inches in length; three-eighths to one-half inch in

width; one-fourth to one-half inch in thickness. Care is taken that the insert has some bone marrow; the importance of this has been pointed out by several German investigators.

Before placing the transplant in its bed, its periosteum is incised in many places so as to allow the underlying osteogenetic cells exit for proliferation. In adults when we do not wish the bone graft to grow longitudinally the incisions are made lengthwise of the graft. In the case of children they are made crosswise. After pressing the graft in place the dense supraspinous ligament, with the posterior part of the halves of the interspinous ligaments, is drawn over the graft with interrupted sutures of heavy kangaroo tendon. It is thus firmly embedded under tension in the spinous processes and the dense intraspinal ligaments, and affords immediate and excellent fixation of those vertebræ involved, even before union takes place. The immediate fixation thus obtained must be far more perfect than that secured by any external orthopedic means, as plaster jackets, etc. This has been especially confirmed by the immediate disappearance of pain in adults and pain and night cries in children (i.e., within a few days). The environment of the spinal insert thus placed is most favourable, it is not only wedged into well nourished, healthy spinous processes which are less than three-quarters of an inch apart, but is also surrounded throughout its whole extent by ligamentous tissue, which is normally attached to bone. The conditions are very favourable to a rapid establishment of an Haversian blood supply from the spinous processes to graft. In one of our cases at the Royal Victoria the end of the graft slipped from the cleft between the split spinous process, but the radiogram clearly showed a bridge of callus from the end of the callus to the cleft above.

Our own experience has been very gratifying, the complete relief from all signs beginning forty-eight hours after the operation. The after-treatment we have followed has been, eight to ten weeks in a "liegen bett." It has also seemed wise, unless otherwise indicated, to delay operation until the seventh or eighth year. This is merely a theoretical action based on the report of the Buda Pesth Congress on the results of arthrodesis at a younger age.

Provided the bone graft be not unnecessarily long, I cannot see that the fixation of four vertebræ would materially affect the growth of a patient in the juvenile class of cases. In young cases, when the deformity is of considerable extent the operator must assure himself that the tibia is long enough to provide the requisite length of graft. In some cases also the greatest care must be observed to prevent decubitus sores.

The question of the fate of the graft is one which is very puzzling to me. I mentioned one case above, but since then I have had the opportunity of having an x-ray picture taken in four others, ten days to two weeks after operation. These have all shown just a faint shadow of the graft, almost imperceptible. Clinically also the flexibility of three other patients three to four months after operation is against the complete bony ankylosis and yet the improvement, local and general, has been marked in all cases. The conclusions I would arrive at would be to advise the operation in adult cases where the deformity will permit the graft being thoroughly inserted, and in juvenile cases where the same can be accomplished, but especially in upper dorsal cases. In the infantile case I feel strongly in favour of the "liegen bett" from the results I have had.

Operation in the cases where sinuses with mixed infection are present must be judged from the surgical standpoint. The question of temperature and increased pulse rate as an index for the constitutional effect must be carefully and thoroughly judged before major surgical procedure can be advised.

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THE RUNNING SUTURE—AND THE BLOODLESS OPERATION

By F. N. G. STARR, M.B. (TOR.)

Associate Professor of Clinical Surgery, University of Toronto

FOR many years I have been endeavouring to eliminate, as far as possible, the ligature, and with it the knot, from my wounds, believing as I do that the knot is a frequent source of irritation that may lead to suppuration, for I suppose it is a well recognized fact that most wounds contain bacteria when an operation is finished. If, then, one is able to eliminate a mechanical irritation, one should also succeed—with other care—in eliminating, with greater regularity, failure in primary union.

My excuse for bringing such a simple matter before this Association is, that time and again surgeons who have been present at my operations have commented upon the simplicity of the technique, the absence of ligatures and the freedom from hæmorrhage.

When the incision is made in any part, all bleeding points are caught in forceps—preferably Ochsner's—and these are usually left until the completion of the operation, though often even this is not necessary. Towels are then clamped over the skin edges to prevent infection from the cut margins.

When one comes to close a central, abdominal incision he begins with a long suture of plain iodine catgut No. 1, at the lower end of the peritoneum and fixes it with a single half turn, leaving an end three or four inches long caught in the forceps. At the upper end the last loop is kept slack until the needle is again passed through this loop and drawn taut. Believing that in the last analysis the recti muscles are the great protectors against ventral herniæ, the edges of these are approximated. In this suture great care should be exercised—most surgeons suture the muscles too tightly—and one of two things must happen under such circumstances, either the suture will cut through in a few hours, causing great pain, or the muscle so constricted will slough. In either case the end sought after will not be attained. The suture is carried

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down to the lower end, the last one is put through double and tied with a half knot to the original loose end. Then the aponeurosis is sutured with the double thread, leaving a loop again at the top, and one strand is cut so that a single thread comes on each side of the loop, and these are tied in a reef knot. With the single thread one goes down through the fat and subcutaneous tissue, taking care to surround any vessels that may bleed, and catching here and there the already-sewn face of the rectus sheath, thus obviating any dead space. At the bottom the knot is completed. Thus one has a knot at the bottom and at the top of the wound and none along the edges, and no bleeding, as well as an absence of dead space.

The same method may be used in closing a hernia or in sewing up after a thyroidectomy. Speaking of the goitre operation, I know of none that lends itself so well to the running suture as a method of controlling hæmorrhage. During the early progress of the operation all bleeding points are caught in forceps, and as early as possible the superior thyroid is secured, ligatured and cut. From that on it is not necessary to use a single ligature. I have not used any for years. The capsule is stripped back and the gland dissected to a pedicle. This pedicle is then clamped with an Ochsner forceps, or two if needed, and the gland is cut away. The running suture is tied under the point of the forceps and then one surrounds the clamp with the running suture, as in the operation described by Pilcher for hæmorrhoids. The clamp is then withdrawn from the loops and the suture drawn tight and tied. The capsule is sewn over the raw surface of the gland and all former bleeding points held by forceps are caught in loops of the suture till all the forceps have been disposed of and there results a perfectly smooth, dry surface with no more than three knots buried about the gland. Closure of muscles and skin may then be proceeded with.

In removing subserous fibroids the running suture has proved a most excellent help. The serous coat is stripped down near to the base of the tumour, and then a forceps—depending upon the size of the tumour—catching the serous coat on each side of the tumour—is clamped home and extrudes the growth. The running suture is then applied, the forceps withdrawn, and the suture drawn tight. There has been no bleeding and the uterus has a smooth, nicely approximated serous coat.

I succeeded in removing seven such growths—the largest about the size of a pineapple—from a uterus four months pregnant, with so little disturbance to the uterus that pregnancy continued

until the very day of *expectancy* and terminated with the presentation of a nine pound boy. The specimens as they appear are not nearly as attractive from a museum point of view as would be the patient's uterus with a window showing the *fœtus* in utero, but the mother is much happier in the possession both of her normal uterus as well as her sturdy child.

Again, in hysterectomy for fibromyoma, an Ochsner forceps is clamped on the broad ligaments, including or excluding the ovaries, as may be required, being careful to have the point of the forceps grasp the uterine artery. The tumour is cut away and a piece of No. 2 plain sterile catgut doubled catches the outer edge of the cut broad ligament. The forceps are then oversewn, the last loop at the forceps' point surrounding the artery. The forceps are then slipped out of the loops and the suture drawn tight. The suture thus catches the cut cervix, including the edge of the reflected serous coat, across the cervical stump, at the edge of which it surrounds the uterine artery of the other side, and continues in loops about the other forceps, which are then withdrawn, and the loops are pulled tight and the suture is tied, when it is found that not only is the hysterectomy completed but the toilet of the stump as well. I have not put a ligature on the uterine artery for seven or eight years. All that remains is to close the abdomen and the operation is finished in from fifteen to thirty minutes, according to the primary difficulty one may have in delivering the growth from the pelvis.

I use the same method of hæmorrhage control in pan-hysterectomy. A loop is made surrounding a tube, passed into the vagina, with a knot on each side of the tube so that there will be no relaxation of the sewn vagina and broad ligaments, when the tube is withdrawn. In the removal of a gall-bladder that is intimately connected with the liver one may begin with the running suture as soon as he starts to detach the gall-bladder. By detaching the gall-bladder with one hand he may follow with the continuing suture in the other hand, controlling hæmorrhage as the dissection proceeds. When the gall bladder is detached and ready for removal, if there are still any bleeding points, one simply returns along the former line of suture until all oozing has ceased, the first line of suture giving a firmer base into which one may sew when working in such friable tissue.

The same procedure is followed in rupture of the spleen, where hæmorrhage is so free, or when a tumour or cyst has been removed. If the first line of suture is not sufficient sew some more, and keep

on sewing till all oozing has ceased. By this means a portion of spleen, that one would otherwise require to remove after ligaturing the pedicle, may be saved.

In resection of the bowel—even the extensive operation where the entire colon is removed—I have found the continuous suture most useful. The mesentery is clamped between a double series of Ochsner forceps, cutting between the forceps as one proceeds, and the bowel is quickly removed. With a double strand of No. 2 iodine catgut one begins by oversewing each pair of forceps, then removing the forceps and drawing the suture tight. When the suturing is complete and the surgeon is ready to tie the proximal and the distal ends of the mesentery, he finds the bowel ends to be anastomosed, not only approximated but resting in their proper relative position, with no tendency to an imperfect rotation. The anastomosis is then easily and quickly accomplished.

I do not claim any originality for the introduction of the running suture, or for the oversewing of the clamps, although I did have a paper partly prepared describing a treatment for hæmorrhoids when Pilcher's paper appeared in the *Annals of Surgery*. I have merely brought this matter forward with a view to demonstrating how it can simplify procedure in certain operations that, judging by the way in which the surgeon storms and fumes at the nurses and assistants, seem to present great difficulty under the usual and better recognized methods.

CLINICAL ASPECTS OF THE REGENERATION OF BONE, AS MANIFESTED BY A STUDY OF THE UNION OF FRACTURES

BY E. STANLEY RYERSON, M.D., C.M.

Toronto

SINCE the publication of Sir Wm. McKeown's monograph on the "Growth of Bone," efforts have been made along various lines either to corroborate or disprove his theories. It occurred to me that some information might be gathered from a study of the x-ray plates of fractures in which union is taking place. As most x-ray plates of fractures are taken within a day or so of the occurrence of the fracture and are usually for the purpose of diagnosis, the number that were available for my study were comparatively few. In looking over the plates of the Toronto General and St. Michael's Hospitals, I was only able to find a small number that illustrated the changes in relation to the periosteum for which I was searching. The question that was uppermost in my mind when carrying out this examination was as to whether the new bone seemed to be developing from the periosteum or whether it came from some other source.

My conception of the tissue changes that occur in the union of a fracture has been along the following line. The end of the bones are first surrounded by blood clot; in this connective tissue forms which becomes transformed into osseoid tissue or callus, either directly or after passing through an intermediate stage of cartilage. After the deposition of some calcium salts from the blood the osteoblasts, which come from the medullary canal, the bone itself and, it was always thought, the periosteum bring about the change into bone. During the earlier stages of these changes while the connective tissue is forming, the x-rays will show practically no changes beyond perhaps some rarefaction and rounding off of the ends of the bones; but as soon as the actual bone formation begins, then a shadow will be thrown on the plate. In studying the x-ray plates of fractures, the line of the periosteum is usually

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only seen if it is stripped up from the bone, when it appears as a thin linear shadow running up or down from the line of fracture for a greater or lesser distance. The acute angle at the point where the periosteum joins the bone is called the osteo-periosteal angle.

If the periosteum were osteo-genetic, then in the healing of a fracture this osteo-periosteal angle should be one of the first positions in which the x-rays would show new bone formation. That this is the case is demonstrated by two cases in which the fracture occurred in infancy. In both of these cases which were in the Hospital for Sick Children, the x-rays showed a shadow quarter inch wide beneath the stripped up periosteum of the femur and extending well into the osteo-periosteal angle, which is explained by the fact that at this age a rapid growth of bone occurs from the large number of osteoblasts which can be demonstrated histologically beneath the periosteum.

In the plates which I have examined I have found that the first parts of the area in relation to the fracture to show evidence of new bone formation are the medullary cavity and the surface of the bones in relation to the line of fracture. The ensheathing callus begins to show close to the bone, and gradually extends out until it reaches the periosteum. If the periosteum is intact, the outer limit of the callus is definitely marked off by it from the muscular and subcutaneous tissues, whereas if the periosteum is torn, the callus extends irregularly out into the soft tissues. The most important point, however, is to my mind the fact that the last part of the space about the fractured ends of the bones which becomes obscured by the shadow indicating new bone formation is the osteo-periosteal angle. In some cases this part of the space has remained clear for weeks or even months after the occurrence of the fracture.

The argument is this. If the periosteum were osteo-genetic, then new bone would be produced beneath it over the area where it is stripped up from the bone and the osteo-periosteal angle would be one of the first parts to be filled up. That this is not the case is manifested by the plates which show that the osteo-periosteal angle is actually the last part of the space to be filled with a shadow, indicating new bone formation. From this, therefore, the natural inference is that the periosteum is not osteo-genetic in character. The plates of the two infants where the osteo-periosteal angle and the area beneath the periosteum showed new bone so early are the exceptions which serve to prove the rule, because in infants numerous osteoblasts can be demonstrated histologically beneath the periosteum.

AN EPIDEMIC OF JAUNDICE

BY MALCOLM MACKAY, B.A., M.D., C.M.

Sherbrooke, Que.

SINCE Hanning analysed eighty-six epidemics of jaundice in 1890, a great many similar occurrences have been reported in medical literature. The severity of the cases has varied much from the severe forms with jaundice, nephritis, hepatitis, severe prostration, and even death, to the mild catarrhal form with but little fever and slight general disturbance.

One of the most interesting series published is that reported by Barker and Sladen¹ in 1909. Although in this epidemic there were but six cases, an opportunity was given to make a complete bacteriological study of each patient in reference to the blood, urine and stools; as well as animal inoculations from the blood, and examination of the blood serum for specific agglutinins. In addition, from the circumstances of the case definite statements could be made in regard to the possibility of contagion and common sources of infection. The conclusions drawn from this series are well sustained and seem to indicate: (a) the infectious character of the disease; (b) the evident presence of gastro-enteritis; (c) the obstructive type of jaundice characteristic of catarrhal jaundice with gastro-enteritis; (d) the source of infection was meat or water with the probability in favour of meat; (e) the only positive serum result suggested the bacillus paratyphosus as the invading organism.

Hecker and Otto² conclude from their cases that it is a non-contagious infectious disease. Leslie³ with an experience of one hundred and thirty-five cases thinks the disease may be transferred by exhalations and excretions of jaundiced patients. Pinniger⁴ in reporting eight cases considers it an infection such as occurs in an epidemic of low virulence, and seems to exclude food or exposure. Hallows⁵ reports twelve cases with several occurring in the same house, but he does not say that he considers it to be contagious.

During the months of March and April, 1911, I had seventeen

cases of acute jaundice under my care. Of these five were males and twelve females, thirteen of the number being between the ages of fifteen and twenty-five years. No two of them were seen in the same house. The symptoms varied in details, but all were seized with nausea and vomiting, accompanied by lassitude, headache, and anorexia, griping abdominal pains, and pain in the back and legs. The temperature varied from 101° to 104° and the jaundice began on the third or fourth day, followed by acholic stools. The liver was usually a little enlarged and somewhat tender, but no enlargement of the spleen was detected. Bile was invariably present in the urine and albumin and casts were found in two instances. There seemed to be no tendency to hæmorrhages but in two cases the itching of the skin was intolerable. The temperature usually became normal in a week but in the more severe cases it lasted a fortnight. The jaundice disappeared after the patient was up and around for some time, and in four cases did not clear up for five or six weeks. The patients all lost weight. My first patient was the only one who acknowledged any indiscretion in diet, and he attributed his illness to eating a quantity of ham of inferior quality.

I heard of so many other cases occurring at the same time, that I sent a series of questions to all the doctors in the city, receiving nine replies containing details of eighty-two more cases. As the population of Sherbrooke is about 17,000 and Leslie³ allows five cases of jaundice of every sort per annum to every 2,000 inhabitants, we should expect some forty-three cases during the year, whereas we have ninety-nine cases reported in about two months. There must have been some common cause for this epidemic.

Including my own cases I found on analysis that there were thirty-four males and sixty-five females—proof that it was not acquired in the ordinary round of a workman's life rather than at home. Of children under fifteen years there were forty-five cases, and only thirteen cases in adults over twenty-five years, the remaining forty-one being between the ages of fifteen and twenty-five years. The disease then was more apt to attack the young.

In twelve cases a definite history of indiscretion in diet could be obtained, but without any common cause.

In practically all cases the onset was rather sudden with lassitude, headache, and anorexia, the jaundice appearing in from two to five days. In thirty-two cases the temperature was rather high (102 - 104°) at the onset, and in but ten cases was it normal. Nausea

and vomiting was invariably present, and accompanied in fifty-one cases by griping pains. Diarrhoea was present in less than half the cases, but headache and dizziness in all. Urticaria was found in fifteen cases and herpes in two. Loss of weight was quite general, and the liver was large and tender in more than 60 per cent. of the patients. The spleen was recorded as palpable in only a few. Albumin was present in seventeen cases and casts in four. No blood was found in the urine, but bile always. The temperature kept above normal in febrile cases from three days to three weeks, the usual time being five days. Convalescence was always established before the jaundice vanished, this latter occurring in mild cases in one to three weeks and in the more severe cases from three to six weeks.

More than one case in a house was reported six times by one physician, three times by another, and once by another, while a fourth had five cases in a small orphanage. These physicians believe the malady was contagious and one of them was able to trace contact in seven of his thirteen cases. About 50 per cent. of my own cases were known to have been associated with others similarly affected, either in the office, school or home. The other men were not able to see any element of contagion in the epidemic.

Climatic changes were blamed for the condition, as the streets were alternately slush and ice at this time of the year, and the air full of moisture, coughs and colds being very prevalent. Influenza taking the form of gastro-enteritis was also considered as being the aetiological factor.

One striking fact was noted, namely, that only one reported case occurred on the east side of the River St. Francis, where the population is 3,900, the greater majority of the cases being found in the north ward (population approximately 3,500). The water supply is the same for both sides of the river, and climatic conditions are naturally identical. Milk and meat infection on investigation could not be traced.

No cultures or inoculations were made in the series, but the comparatively limited area covered by the epidemic in the short time during which it was prevalent would suggest its spread by personal contact.

The following fairly obvious conclusions may be drawn from this series:

- (a) The disease is infectious.
- (b) Gastro-enteritis is present.

(c) The jaundice is of the obstructive type characteristic of catarrhal jaundice.

(d) The disease is possibly contagious.

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THE new health by-law makes it compulsory that all cream and milk sold, or used for butter making, in Calgary shall come from cows which have been submitted to the tuberculin test. This rule, however, does not apply to other places in the province and therefore an amendment has been prepared which makes it no longer necessary that cream used only for the purpose of butter making shall be subject to the above prohibition. It is intended that this amendment shall remain in force until the tuberculin test is made compulsory throughout the province.

Case Reports

CONGENITAL CARDIAC DISEASE

BY D. GRANT CAMPBELL, M.D.

AND W. G. HEPBURN, M.D.

First Assistant Pathological Laboratory, Montreal General Hospital

THE case is one of pulmonary hypoplasia, stenosis of the conus of the right ventricle with supplementary cusps, defect of the interventricular septum at the base with *Rechtslage* of the aorta, and patent foramen ovale. It appears to be of sufficient interest both clinically and pathologically to warrant our bringing it to your attention.

The patient, E. H., aged sixteen years, was first seen on January 17th, 1913, when he was suffering from a typical attack of influenza; on that occasion the following history was obtained. He was born in Worcester, England, January, 1897, being a premature, eight months' child. The labour was normal, except that it was a breech presentation. When two months pregnant, the mother had a threatened abortion and had lost considerable blood. The day following his birth, he was noticed to be blue and has always since remained bluish, and has been subject from birth to dyspnoeic attacks and a spasmodic cough with glary tenacious sputum, often slightly blood-tinged. At ten months of age, he had a severe attack of *measles*, the rash of which was purplish in hue, and at three years of age is said to have had a fall resulting in *complete paralysis* of the lower limbs for about one week. At the age of seven, he had *pertussis*, and at nine was in the contagious hospital with *diphtheria* followed by *scarlet fever* during his convalescence. Two years ago, he had a very severe attack of *pneumonia* accompanied by marked abdominal pain. He came to Canada one and one half years ago, and since that time his general health has been better. He has all his life been subject to bronchitis following the least exposure, while the dyspnoea has always been so great on exertion, that to walk three or four hundred yards was sufficient to exhaust him completely.

The family history has one interesting feature: He is the eldest of five children, the next three—a boy of fifteen, a boy of thirteen, and a girl of nine are healthy—but the youngest died eight hours after birth having been remarkably cyanosed during her few hours of life. The father has always been healthy and the mother fairly so, though she had an oöphorectomy done in the General Hospital last summer. There is a history of cancer and tuberculosis in the mother's family.

The present condition of the patient at that examination showed an undersized, poorly nourished boy with very marked cyanosis—quite a deep purplish colour of the lips, ears, and fingers, while the skin of the whole body showed a bluish tendency. The hands were quite cold and clammy with long tapering fingers and very marked clubbing of the ends. The right thumb was deformed, the distal phalanx being absent. There was no pulse to be felt in the right wrist and no right radial artery was discoverable. There was no glandular enlargement. The chest was much deformed, being of the pigeon-breasted type, and asymmetrical due to a left lateral scoliosis of the spine. This deformity of the spine had only been noticed in the last few years. The lungs at this examination showed numerous fine crepitations scattered throughout their whole area. The examination of the heart showed a well defined apex beat just outside the nipple line. *No thrill could be felt.* The measurements of the cardiac dullness showed slight enlargement, upwards into the second interspace on the left side of the sternum 1.5 cm. to the right and 9 cm. to the left of the mid-sternal line. On auscultation there was a *loud purring systolic murmur heard over the whole præcordium*, but of maximum intensity just to the left of the sternum in the third interspace. The murmur seemed to be transmitted about equally in all directions and was so loud as to make any other sound indistinct. Unfortunately no blood count was made. The tongue was clean, but quite cyanosed: the abdomen was negative. The boy's intelligence was above the average, as exhibited in his samples of wood carving and pyrography.

On February 9th he was seen again on account of an acute attack of bronchitis due to exposure during a short sleigh ride. The patient was fairly sick and deeply cyanosed. Later in the day he began to cough up glary, blood-tinged sputum, and at six the next morning he complained of a sudden sharp pain in his right side, he felt "as if something had broken," and died in less than an hour.

The *autopsy* showed passive congestion of all the organs, œdema and congestion of the lungs, chronic pleuritis and acute bronchitis. The heart was of peculiar shape externally, having a rounded apex, formed equally by both ventricles, and a broad base with a deep auriculo-ventricular groove behind which the auricles lay well backward. The right auricle was hypertrophied and much dilated. The auricular septum presented a large, crescentic, patent foramen ovale. The right ventricle was greatly hypertrophied, 1·7 cm. thick and 3 cm. thicker than the left. The tricuspid valve was abnormal, its infundibular cusp being wanting. A large defect admitting the finger 1·8 cm. occupied the base of the interventricular septum, lying just below the left posterior aortic cusp. The aorta, a thick-walled vessel 5·3 cm. in circumference, arose above this defect, two-thirds from the right ventricle and one-third from the left, and received blood from both chambers through the defect.

The conus of the right ventricle was reduced to a small triangular cavity lined by tendinous endocardium which was divided off from the main body of the ventricle by a much constricted portion, which presented two distinct semi-lunar cusps; one of these, placed on the muscular wall of the septum, was well developed being 1·7 cm. long, and had a deep sinus of valsalva behind it; the other, placed on the opposite wall, appeared more like a pocket of endocardium. The base of the pulmonary valve lay 1·8 cm. above the upper margin of these cusps. The pulmonary orifice was 2 cm. in diameter and was closed up by two thin and apparently competent cusps; these, however, were asymmetrical, one being longer and shallower than the other. They were also badly differentiated at its base from the ventricular wall.

An interesting point in view of the analogy to the heart of the shark (see below), is that the muscular wall of the conus is prolonged into the root of the pulmonary artery as far as the free edge of this bicuspid valve. The pulmonary artery is small and thin-walled. It expands above the level of the valve to a circumference of 2·4 cm.

The left auricle is remarkably hypertrophied, its muscular wall about 2 cm. above the base of the mitral valve measuring 5 cm. in thickness. The left ventricle is thick-walled. The mitral valve is anomalous, its left posterior segment being represented by a valvular fringe with many chordæ tendineæ. Its right posterior segment, however, which is strong and large, screens the defect.

Clinically the interest of the case centres round the following features:

1. *The marked resistance shown to infectious diseases.* This is a characteristic feature of pulmonary stenosis cases. While there is an equal liability of infection, there seems to be an increased rather than a decreased resistance to all infections except pulmonary tuberculosis.
2. *The relatively long duration of life.* Of the similar cases reported only five outlived fourteen years, of which the oldest died at twenty. On the other hand when the interventricular septum is closed the duration of life is relatively longer than in this group.
3. *The associated defects of the osseous system.* In regard to this point there is room for doubt regarding the scoliosis having been congenital, but the defect of the right thumb at all events was there at birth.
4. *The close correspondence of the symptoms and physical findings with the symptom complex in the few cases with similar lesions already reported.* In Dr. Abbott's¹ statistics of four hundred cases of congenital cardiac disease there are twenty-two having the same major defects of which four showed exactly similar lesions in detail; twelve were male, nine female; the oldest twenty, the youngest eleven months; five gave a history of recovery from infectious diseases; thirteen showed evidence of marked cyanosis, and six of marked clubbing of the fingers; fifteen gave no cardiac thrill while seven did, and four showed anomalies of the vessels.

REMARKS. The interest of the anatomical findings in this case may be said to be two-fold. Firstly, the type of pulmonary stenosis presented is that in which the conus is a separate chamber cut off from the body of the right ventricle by a constricted portion *provided with two distinct cusps*. The appearance of these cusps is apparently unique in the literature, and it is of the greatest interest from the developmental standpoint, for while there is no stage in the development of the heart at which cusps are present at this point, the condition presents a remarkable analogy to the two chambered heart of the shark. In this animal the bulbus cordis of the common arterial trunk is a muscular chamber provided with three sets of valves, the uppermost of which remains as the permanent semilunar valves while the lowest marks the boundary between the bulbus and the chamber of the ventricle. The cusps, situated at this point in the present case, can be explained only on phylogenetic lines as an instance of a peculiar atavism,

which gives force to the argument of Greil² and Keith³ that the bulbus cordis in the embryonic human heart becomes submerged in the conus arteriosus of the ventricle, and that this submergence constitutes a critical stage in the development of the heart, whereby through some interruption in growth various types of conus stenosis may result.

The other point of interest is the combination of the three conditions; congenital pulmonary stenosis, defect of the interventricular septum and *Rechtslage*, or deviation to the right of the aorta, so that it comes to arise as it does in this case more or less from the right ventricle. This constitutes the commonest combination of all cardiac anomalies and is the condition usually present in cases recognized clinically as "*la maladie bleue*," and is explained by the simple facts of development as described by Born, His and others. It will be remembered that in the early stage in which the heart is a two chambered organ, the common ventricle lies below and in front and gives off the common arterial trunk from its *right* upper angle, while it receives the blood from the common auricle through the common auriculo-ventricular orifice which lies on its *left* and posteriorly. With the development of the cardiac and aortic septa a shunting of the parts towards the median line takes place; the common arterial trunk comes to lie more to the left and the common ventricular orifice more towards the right, the two structures approaching each other, so that by the growth downwards of the aortic septum and the growth upwards of the interventricular septum, and finally the union of these two, the aortic and mitral orifices come to be placed in the left ventricle and the pulmonary and tricuspid orifices in the right ventricle. A defect of the interventricular septum may be due to a primary arrest of growth of the parts, but much more frequently it is due either (a) to a failure of this shunting of the parts towards the median line, so that the common arterial trunk does not come to lie over the common auriculo-ventricular orifice and the aortic cannot unite with the interventricular septum (*Rechtslage* of the aorta and the septal defect) or (b) to a malposition of the aortic septum within the trunk, so that a smaller pulmonary artery gives off a large aorta (developmental pulmonary stenosis with septal defect). Under either of these conditions, *Rechtslage* of the aorta on the one hand or pulmonary stenosis on the other will necessarily result, and will form an essential part of the defect. The two conditions, namely, a failure of the shunting of the parts toward the median line and a malposition of the aortic septum, may

readily occur together and will lead to the combination seen in the present case, *Rechtslage*, or deviation to the right of the aorta, developmental pulmonary stenosis, and septal defect.

The writers' thanks are due to Dr. Maude E. Abbot and Dr. A. M. Burgess of McGill University for their very kind and able assistance.

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A HOSPITAL has been built at Ashcroft, B.C. The necessity for one has been felt keenly for the past year, for not only is the population of Ashcroft increasing rapidly but there are many construction camps in the neighbourhood and it was important that some provision should be made in case of accidents. The hospital was opened on August 16th, by Hon. Dr. Young. It has accommodation for nearly fifty patients.

The next Annual Meeting of the Canadian Medical Association will be held at St. John, N.B., July 7th, 8th, 9th and 10th, 1914.

Editorial

THE SEVENTEENTH INTERNATIONAL MEDICAL CONGRESS

THE press, both lay and medical, has paid so much attention to the International Medical Congress in London, that while so important an event might well demand a notice in this JOURNAL extending over several pages, we may, without serious loss to our readers, be brief in our review of the event. But attempting to be brief, it is difficult to know from what aspects the Congress may best be treated. "Was it a success?" is the stock question addressed to those who were participants. Compared with the last meeting, thirty-one years ago, when Pasteur, Lister, Koch, and Huxley made notable pronouncements, it might well be held that this meeting did not compare with its predecessor; the day of the giants might well seem to be passing. We may be wrong: we may from our very nearness be incapable of appraising our leaders of to-day, but certainly it seems as though of those who took a leading part in the Congress, one alone—Ehrlich—belongs to the same class as Pasteur, Lister, and Koch. But saying this we must realize the extraordinary changes which have occurred in the one generation. Thirty years ago he who thought he had made a notable discovery might safely wait to announce his gospel before the most important Congress of the year: to-day such is the scientific activity all over the world, that to obtain priority it is necessary to cable news of a discovery to the various capitals even before time has been given for confirmation of results by control tests. Inevitably, therefore, an International Medical Congress of to-day offers to the profession little that is

not already known, and the individual has not nearly the same chance of appearing in the lime light.

And so the main functions of the medical congress have become reduced to two, namely, and first, to employ the interest excited in the popular mind by the meeting together of a vast number of physicians from all parts of the globe, to bring authoritatively to the public notice the more recent advances in medicine; and in the second place, to afford a meeting ground for the leaders and representatives of our profession from all parts of the globe, that they may come to know each other and interchange views, not so much at the actual meetings of the Congress, but between times, in social intercourse.

Now the International Medical Congress fulfilled both these functions admirably. More particularly interest in medical matters has increased extraordinarily within the last few years, and the amount of space given to the proceedings of the Congress by the leading journals of various countries has been very remarkable; indeed, it may be said that already as a result of the prominence given to one matter in one section of the Congress, the British Government has declared itself prepared to establish a Royal Commission upon the subject of venereal diseases. Most suggestively two great daily papers, the *Times*, and the *Morning Post*, which in matters of form and worship of Mrs. Grundy stand pre-eminent, have at length during the course of the Congress printed the word "syphilis" in their columns in place of various absurd periphrases. We shall not be surprised if in the years to come the London meeting will stand out more especially as initiating a universal campaign for the suppression of venereal diseases.

And as regards the second function, namely, the meeting together of medical men, without doubt the Congress will for long years hold the record. More than eight thousand members were enrolled and took part in the twenty-three sections. We may safely say that no city in the world could

have accommodated so large a number, and that, without any apparent disturbance to the ordinary life of the city. The Congress was simply engulfed in the great metropolis. What, again, must have impressed every stranger, was the perfect organization. Without officialdom, and without red tape, everything appeared to be prepared on a proper scale, and those who had experience of recent International Congresses at Lisbon, Rome, and elsewhere, could not but be impressed by the marvellous difference; could not but realize that the success of the British in the world must depend upon this practical power of organization. The success of the meeting did not depend upon Government support—such support amounted merely to a dinner for five hundred guests at the Hotel Cecil. It did not depend upon any expert office staff: Dr. Herringham, the general secretary, with no previous experience of arrangements on so huge a scale, had to arrange everything, and for his labours deserves at least a baronetcy. But great as was his work the success did not depend merely upon him. Everyone from Sir Thomas Barlow, the president and the presidents of the different sections down to the secretaries, and, indeed, their wives, appeared to work away quietly and cordially to ensure success. The hospitality to strangers was on a most lavish scale: dinners given by individuals to one hundred and two hundred guests occurred each night, not to mention innumerable smaller parties, and it was this private hospitality that gave the opportunity for social intercourse. As Canadians we may well feel proud of our great representative in London, Lord Strathcona. One of the most delightful affairs of the whole Congress was the reception given by him to the whole Congress in the Royal Botanic Gardens which were converted into a veritable fairyland for the occasion. The Congress was a memorable success.

FIRST SIGNS OF INSANITY

IT is a strange anomaly that physicians who have specially to do with the care and treatment of the insane are the very last who have an opportunity of observing the first signs of insanity. Indeed, the family physician is himself a late comer upon the scene. The first witnesses to a patient's aberration are his family, his friends, and the lay members of the community in which he lives, but it is rare for them to suspect the true cause of the symptoms which they observe. Dr. Bernard Hollander has written a book* in which he demonstrates how fine is the distinction between the normal and abnormal mind, between rational and irrational thought, between wholesome and perverted feelings, between responsible and irresponsible conduct.

In the majority of cases patients come under treatment for insanity at a time when the possibility of a cure has passed away, and the law makes things worse by insisting that a hard and fast material line exists between the sane and the insane; and that all persons who can be certified as insane shall be deprived of their liberty and immured in an asylum of one kind or another. This system is an inheritance of folly from the days when ignorant and sentimental persons gained control of the public ear with the cry that persons were habitually held under control for reasons unconnected with their state of mind. Rich people can evade the law by procuring treatment in the secrecy of their homes: the poor are practically helpless until their mental condition is disclosed by some gross disorder of conduct. Insanity is bad enough in itself: the public and official stigma of lunatic makes it still more dreadful.

Dr. Hollander's book is not one which is designed for the profession alone. It is written in so engaging a style, and in so reasonable a spirit, that it will gain entrance within

* "The First Signs of Insanity," Funk & Wagnalls Company, New York, 1913.

a far wider circle. It will make the profession and the public more alert, and it is quite conceivable that an individual in whose family there is a neurotic taint should become intelligently watchful for those earliest signs of the approaching malady. Each man is the most familiar with his own mind, the secret springs of his conduct, and the normal course of his life. It is for him to set a watch upon himself, to check an abnormal reaction to any given stimulus, or, if that is impossible, to avoid the irritation which leads to disordered conduct.

There are many persons who, in the long course of an even life in the country, conform absolutely with a normal mental standard. When they return to town and are at the mercy of every one who can gain access to a telephone within a radius of four hundred miles, when their eyes and brains are blinded by the electric glare and are denied the calm of the huge and thoughtful night, when they are obliged to attend entertainments which they do not desire and give entertainments which they cannot afford, and are in continual peril of their lives from the abyss in the street and the general disorder of a growing city, their self control breaks down. Such persons should immediately flee to some place of refuge.

There is yet an earlier sign of insanity than any Dr. Hollander has mentioned. It reveals itself in the letters which a man writes. When a man who has always written urbanely and temperately writes a letter which appears to be foolish, vulgar, or impudent, the recipient may well suspect that he has before him evidence of aberration of mind which may be temporary but may be the forerunner of worse symptoms which are to follow.

THE London County Council has decided to close its Reformatory for Inebriate Women at Farmfield, because in the opinion of an investigation committee the results did not justify the expenditure. Of the six hundred cases which have

been detained at Farmfield, less than one fifth have done well, and about one half have relapsed; 15 per cent. of the cases could not be traced.

PHYSICIANS, as a class, are not long-lived, but a notable exception is reported from a town in Illinois, where Dr. W. T. Linn died recently at the age of one hundred and eight. He is said to have practised medicine for more than seventy-five years.

LA Société des Médecins Chefs des laboratoires de Radiologie et d'Electro-radiothérapie des Hôpitaux de Paris announces the inauguration of a course in medical electricity, radiology and radium therapy, to be given in the Paris hospitals from November 3rd to December 2nd. The course, which is free to physicians, will be repeated twice yearly in May and November. Information may be obtained from Dr. Delherm, Hôpital de la Pitié, Paris.

WE are accustomed to read of the criticism of governing boards of public hospitals, but the following which is taken from an account of a meeting of such a board in a western city is, we hope, unusual. "The only other matter of *importance* which came up was a letter from the Trades and Labour Council, protesting against the action of the hospital board in having a Chinese cook on the hospital staff." The italics are ours.

THE Board of Health of Ontario is making good use of the powers invested in it by a recent Act. Recently a municipality was instructed to undertake a work in the interest of public health, and to remedy a situation which amounted in fact to a nuisance. It was loath to spend money on such an object. The Board of Health thereupon had the work

done, and sent the bill to the municipality which will have to pay the cost. Similarly, many hotels in outlying districts have been compelled, much against the will of the proprietors, to improve their sanitation.

THE Government of Queensland has issued a proclamation pursuant to the provisions of the Health Act, declaring that in Brisbane and its immediate neighbourhood venereal diseases shall be compulsorily notifiable under the Act. The regulations provide that if the commissioner or any medical practitioner suspects that a person is affected with venereal disease, the commissioner may in writing require such person to submit herself or himself for examination by clinical and bacteriological methods. Any breach of the regulations is punishable by a penalty not exceeding £20.

BEGINNING this fall Harvard University and the Massachusetts Institute of Technology are to maintain in coöperation a school for public health officers. The facilities of both institutions are to be available to students in the school and the Certificate of Public Health (C. P. H.) is to be signed by both President Lowell and President MacLaurin. The object of this school is to prepare young men for public health work, to fit them to occupy administrative and executive positions such as health officers or members of boards of health, as well as secretaries, agents, and inspectors of health organizations.

OWING to the untimely death of Dr. Nathaniel Alcock, professor of physiology at McGill, and to the moderate remuneration that generally falls to the lot of the scientific worker, his family has been left wholly unprovided for. His widow has to face the upbringing and education of four young children, the eldest seven, and the youngest two years of age.

It is thought that the most appropriate form a memorial could take would be that of a fund to enable his three daughters and one son to receive an adequate education. Professor Alcock's colleagues in England have sent out an appeal to his friends asking them to contribute to a fund for this purpose. The appeal is signed by Sir J. Rose Bradford, Professors Starling, Waller, and Bayliss, Dr. Willcox, of St. Mary's, Dr. Ellison, and Principal Peterson. Dr. J. G. Adami will gladly receive and acknowledge any contributions to this fund, forwarded to him at the McGill Medical College, by Professor Alcock's friends in Canada.

THE first examinations of the Medical Council of Canada under the provisions of the "Roddick" Bill will begin on Tuesday, October 7th. There will be fourteen English and fourteen French examiners. The number of subjects is seven, namely: anatomy, physiology, surgery, medicine, midwifery and gynaecology, hygiene and state medicine, pathology and bacteriology. All the written and oral examinations will be held in the new McGill medical building and the clinics in the four great hospitals. The number of candidates qualified to enter is seventy-six, hailing from every province in the Dominion, besides a few Canadian graduates residing in the United States. According to the regulations, "there shall be two examiners in each subject, who shall conjointly set and examine each paper and conjointly examine the candidates in the oral and clinical examinations. The percentage in each examination in each subject shall range from 0 to 100, sixty per cent. of the total marks in each subject constituting pass marks." It is expected that the examinations will extend over ten days at least. Dr. Powell, with his deputy registrars, English and French, will be in full charge throughout.

Book Reviews

CLINICAL ELECTROCARDIOGRAPHY. By THOMAS LEWIS, M.D., D.Sc., F.R.C.P. London: Shaw & Sons, 1913.

The generation of electric currents at each contraction of the heart muscle was demonstrated by Köllicker and Müller nearly sixty years ago, and modern methods in recording and interpreting those currents is the outcome. This monograph of Dr. Lewis is the last word in scientific precision of diagnosis. He does not pretend that a good working knowledge of the heart can be obtained in no other way; but he puts forward the claim that no hospital can afford to neglect the use of the galvanometer if it aims to rank amongst institutions whose design is efficiency.

BLOOD PRESSURE IN GENERAL PRACTICE. By PERCIVAL NICHOLSON, M.D. Illustrated. Philadelphia, London, and Montreal: J. B. Lippincott Company, 1913.

Blood pressure well deserves a book to itself, since an instrument for measuring blood pressure has come to be as necessary as a stethoscope in many cases. In examinations for life insurance its employment is a matter of routine, and insurance companies are the last to be carried away by new inventions. Dr. Nicholson's book contains a complete justification for the employment of this method of precision.

NEURASTHENIA. By GILBERT BALLET. Translated by P. CAMPBELL SMITH, M.D. Third edition; illustrated. Toronto: The Macmillan Company of Canada, 1913.

Professor Ballet is perhaps the leading authority in France upon the subject of which he writes. He is a member of the faculty of medicine, physician to the Hôtel Dieu, and was president of the Société de Neurologie. His book is well known. Three editions in French have been published, and this translation by Dr. Campbell Smith is from the third edition. The original title was "L'Hygiène du Neurasthénique," but in course of time the additions to the work became so considerable that a more generous term was demanded, although it has become a convenient name to cover much

erroneous, or incomplete, diagnosis. The thesis of the book is that a good moral and physical hygiene, a well conceived dietary, and suggestion do more for the neurasthenic patient than "a confused multitude of discordant drugs." The book is so beautifully written—as most books in French are—and so well translated that the reading of it is an intellectual treat apart from the knowledge it conveys.

A CLINICAL SYSTEM OF TUBERCULOSIS, DESCRIBING ALL FORMS OF THE DISEASE. By DR. B. BANDELIER AND DR. O. ROEPKE. Translated by G. BERTRAM HUNT, M.D., B.S. Toronto: The Macmillan Company of Canada, Limited, 1913.

This systematic study of tuberculosis is translated from the second German edition of "Die Klinik der Tuberkulose" which succeeded the first edition after little more than a year. It gives a complete clinical description of every form of tubercular disease; it considers tuberculosis as a pathological entity, and obliterates the distinctions formerly drawn between the medical and surgical forms of the disease. In the process of translation certain omissions have been made, especially of sections dealing with German sanatoriums, and legal regulations in connexion with public health in Germany, which are of secondary importance in English speaking countries. The book has had a large vogue in the medical world, and has attained the distinction of having been translated into Spanish. This is not Dr. Hunt's first essay in translating, and he has performed his difficult task with much distinction. At a time like the present when the subject of tuberculosis is exciting so much interest, this book, coming from so high an authority, will be eagerly welcomed.

DISEASES OF THE EAR. By PHILIP D. KERRISON, M.D. Illustrated; pages 588. Philadelphia, London, and Montreal: J. B. Lippincott Company, 1913. Charles Roberts, 201 Unity Building, Montreal.

This book contains a fresh study of diseases of the ear by an author who has newly come into the literary field. It is an attempt, and a successful one, to present this difficult subject in the light of the more recent advance in knowledge. And that advance has been considerable in the last six years in the laboratory, and in the consulting room. During that period the subject of syphilis has

awakened a new interest, and it has been subjected in all its phases to such a scrutiny as it has never hitherto received. The static labyrinth has come in for a fresh inquiry, and there are many investigations in progress upon the influence of autogenous vaccines, and leucocytic extracts upon certain phases of aural disease. In times gone by the aural surgeon confined himself within the limits of the tympanum and mastoid process, but of late he has entered the more hazardous field of intracranial surgery, and the yet more delicate and difficult work upon the auditory labyrinth itself. Parts of the field which have hitherto received rather summary treatment come in for more detail in this book. The physiology of the labyrinth, the suppurative diseases, and the surgery of that organ, are considered in three chapters which occupy a considerable section of the book; and the suppurative lesions of the brain and meninges are given more consideration than is usually allotted to them. In the description of an operation each successive step is illustrated, and this does something to help practitioners who are denied the advantages of large surgical clinics. The illustrations are for the most part done from original drawings by Miss Fry. The general surgeon will find in it a wealth of information and a sure guide to the best practice.

A LABORATORY GUIDE IN PRACTICAL BACTERIOLOGY. WITH AN OUTLINE FOR THE CLINICAL EXAMINATION OF THE URINE, BLOOD, AND GASTRIC CONTENTS. By W. T. CONNELL, M.D., M.R.C.S., ENG. Third edition, revised. Price, \$1.50. Kingston: Uglow and Company, 1913.

This is the kind of book one likes to see. It is written by a professor in a Canadian school, intended in the first place for his students, and printed in his own town without pomp of text or binding. It is a workmanlike book, and contains quite sufficient directions for the purpose for which it is intended. There is no unnecessary material in it, and it has been tested and approved of by many generations of students, who, after all, are the best judges of their own needs.

THE BRADSHAW LECTURE ON THE DIAGNOSIS AND TREATMENT OF INCIPIENT PULMONARY TUBERCULOSIS. By DAVID BRIDGE LEES, M.D. (Cantab), F.R.C.P. (Lond.). Price, 5s. net. London: H. K. Lewis, 1913.

The thesis which Dr. Lees seeks to establish is stated in his own words to be:

1. That the existence of an incipient pulmonary tuberculosis can be easily demonstrated by careful percussion (provided that during the examination of the front of the chest the patient is in the recumbent position with relaxed muscles) long before any bacteriological evidence is obtainable, and while the auscultatory evidence is still insufficient for a diagnosis.

2. That a negative bacteriological report is often fatally deceptive, and that to wait for the demonstration of bacilli in the sputum is like postponing the diagnosis of cancer until the glands are involved.

3. That in the earliest stage of a pulmonary tuberculosis it is always possible, and in a somewhat later stage usually possible, to obtain prompt and permanent arrest of the disease by the employment of the method of continuous antiseptic inhalation. The evidence on which this statement is based is given in the table of seventy cases, and the clinical facts are stated in the papers reprinted as appendices to the lecture.

HEADACHE. ITS VARIETIES, THEIR NATURE, RECOGNITION AND TREATMENT. A THEORETICAL AND PRACTICAL TREATISE FOR STUDENTS AND PRACTITIONERS. By DR. SIEGMUND AUERBACH, Chief of the Polyclinic for nervous diseases in Frankfort. Translated by ERNEST PLAYFAIR, M.R.C.P. One of the Oxford Medical Manuals, 208 pages, 1913, price, \$1.50. Toronto: D. T. McAinsh & Co.

This important little book will do much towards a clearer differential diagnosis of the various forms of headache. Until that is done an adequate treatment of this troublesome condition must be difficult, if not impossible. The author assembles much information and comments upon it with great wisdom.

DISEASES OF THE EYE. By GEORGE E. DESCHWEINITZ, M.D., Professor of Ophthalmology in the University of Pennsylvania. Seventh edition, thoroughly revised. Octavo of 979 pages, 360 text illustrations, and seven lithographic plates. Philadelphia and London: W. B. Saunders Company, 1913. Cloth, \$5.00 net, half morocco, \$6.00 net.

It is only necessary to mention that a new edition of Dr. deSchweinitz's "Diseases of the Eye" has appeared. This is the seventh edition, and the changes are considerable. They deal with the important discoveries and observations which have been

made in the last three years, such as the use of vaccine therapy, of salvarsan, and the septic origin of iritis and uveitis. In addition there are paragraphs upon lesser matters, and the result is to keep the book, as it has always been, a standard for the student, the practitioner, and the specialist.

THE SANITARY OFFICER'S HANDBOOK OF PRACTICAL HYGIENE.

By W. W. O. BEVERIDGE, D.S.O., Lieut.-Col. R.A.M.C., M.B., C.M. (Edin.), and C. F. WANHILL, Major R.A.M.C., M.R.C.S. (Eng.), L.R.C.P. (Lond.). Second edition. London: Edward Arnold. Toronto: The Macmillan Company of Canada, Limited, 1912.

Everything a sanitary officer requires to know—and much more—is contained in this book. Although it is written by a lieutenant and a major in the Royal Army Medical Corps, its usefulness is not limited to military life. It is in reality a handbook, a thing of every day utility, and an admirable supplement to the more elaborate treatise upon the subject.

A TEXT-BOOK OF BIOLOGY. FOR STUDENTS IN MEDICAL, TECHNICAL AND GENERAL COURSES.

By WILLIAM MARTIN SMALLWOOD, Ph.D. (Harvard), Professor of Comparative Anatomy in the Liberal Arts College of Syracuse University, and in charge of Forest Zoology in the New York State College of Forestry at Syracuse. Octavo, 285 pages; illustrated with 243 engravings and 13 plates, in colours and monochrome. Cloth, \$2.75, net. Lea & Febiger, publishers, Philadelphia and New York, 1913.

This is a new book, and we cannot introduce it better than by making a repetition of a part of the publishers' announcement: "Biology is now recognized as one of the fundamental sciences in the study of medicine, and most of the medical colleges either require a knowledge of it for entrance, or include it as part of the preliminary instruction. This has given a new stimulus to the teaching of this subject, and has awakened a broader interest in it. The appearance of a new text-book, written in accordance with the most modern ideas, and designed to meet the needs of the medical student, is therefore timely. Professor Smallwood's work is unique in the excellence of its instruction and the high standard of its numerous illustrations. The method of imparting the facts leads the reader to think for himself and cultivates his powers of obser-

vation. To the physician who graduated before biology was generally taught in the medical curriculum the book should be of especial interest and value." Dr. Smallwood's book is more than a companion for students; it enunciates many of the principles which underlie human society, and is in reality a philosophical treatise. Fact and inference are nicely joined and many an evening can be spent upon it, if only for the pleasure of reading a well-written book.

DISEASES OF CHILDREN. By various authors. Edited by A. E. GARROD, D.M., M.A., F.R.C.P., F.R.S.; F. E. BATTEN, M.D., M.A., F.R.C.P., AND H. THURSFIELD, D.M., M.A., F.R.C.P. Illustrated. Price, \$8.00 net. London: Edward Arnold. Toronto: The Macmillan Company of Canada, Limited, 1913.

There are specialties within specialties, and it is now the custom for a specialist to give especial attention to some particular portion of the field which he has chosen for his own. In the general subject of diseases of children, there are no higher authorities than Doctors Garrod, Batten, and Thursfield, although each has cultivated with fine care some particular part of it. They have associated with them more than a score of other physicians, all but two of them being resident and practising in London. The joint result is this noble volume of near twelve hundred pages, beautifully illustrated and printed, and bound as only an English binder can. It is difficult to believe that a specialist in diseases of children should be willing to continue to practise his specialty without informing himself of the opinions which are expressed by these distinguished authorities.

THERAPEUTICS OF THE GASTRO-INTERSTINAL TRACT. By DR. CARL WEGELE. Adapted and edited by M. H. GROSS, M.D., AND I. W. HELD, M.D. Illustrated; price, \$3.00. New York: Rebman Company, 1913.

This book is more than a translation of Dr. Wegele's "Therapie der Magen und Darm Erkrankungen." Extensive additions have been made; a chapter on the oesophagus is added, also a chapter upon x-ray diagnosis, upon the pancreas, and upon parasitic diseases, and diseases of the intestinal blood vessels. It is a thorough piece of work and embodies the best German and American practice. The tables are elaborate and the directions for treatment minute and full.

STERILITY IN THE MALE AND FEMALE AND ITS TREATMENT. By MAX HUHNER, M.D. Price, \$2.00. New York: Rebman Company, 1913.

This book is one which might be called scientific, as the author has taken infinite pains with his work, and he must have found it a very disgusting business. He seems to have been especially fortunate in finding patients who were complacent enough to submit to his incessant examinations. The results he has obtained should do something towards preventing the practice of copying errors from one book to another. The causes of sterility would appear to be many and varied and the results of treatment not very promising.

A COURSE IN NORMAN HISTOLOGY. A GUIDE FOR PRACTICAL INSTRUCTION IN HISTOLOGY AND MICROSCOPIC ANATOMY. By RUDOLF KRAUSE. Translated by P. J. R. SCHMAHL, M.D. Part 1, Microscopy, price, \$0.75. Part 2, price, \$5.50. Illustrated. New York: Rebman Company, 1913.

The first part of this work is a guide to the proper use of the microscope for all students, and the second part deals exclusively with histology as it presents itself to students of medicine. It contains ninety-eight plates with two hundred and eight figures, all beautifully done. The publications of the Rebman Company excel in respect of illustration, and this one is no exception. A student who owned this handsome volume might well consider himself fortunate.

THE MODERN TREATMENT OF NERVOUS AND MENTAL DISEASES. By American and British authors. Edited by WILLIAM A. WHITE, M.D., AND SMITH ELY JELLIFFE, A.M., M.D., Ph.D. Volume II. Illustrated. Philadelphia and New York: Lea and Febiger, 1913. Toronto: D. T. McAinsh & Company.

In the JOURNAL for July at page 608 *et seq.* may be found a full description of this work which was described as "a new book done in a new way." The second, and final, volume has just appeared, and it bears out the large promise which was made in the first. It contains over eight hundred pages and both volumes together occupy seventeen hundred pages. We note with pleasure that the article upon the treatment of diseases of the cranial nerves

and organic lesions of the spinal cord is written by Colin R. Russel, neurologist to the Royal Victoria Hospital, Montreal.

OPHTHALMOSCOPIC DIAGNOSIS BASED ON TYPICAL PICTURES OF THE FUNDUS OF THE EYE WITH SPECIAL REFERENCE TO THE NEEDS OF GENERAL PRACTITIONERS AND STUDENTS. By DR. C. ADAM. Translated by M. L. FOSTER, M.D. Illustrated. New York: Rebman Company, 1913.

This book is dedicated to the memory of Julius v. Michel, as it puts into effect his plan of bringing into relief the relations that exist between diseases of the eye and those of the body as a whole. The real purpose of the book is that it should be a systematic guide to diagnosis, and the illustrations are intended to serve as aids towards that end. The various ophthalmoscopic pictures are used as a means of classification, and the systems observed are intended to bring out the diagnosis and to impress the clinical picture on the mind. This is in contradistinction with the usual text books which begin with clinical conceptions of disease, and then give a portrayal of their symptoms. In short, the book follows the practice of Elsching, who was the first, formally, to take the ophthalmoscopic symptom as a basis for classification. The pictures present the inverted image magnified about ten times. The plates are of extraordinary beauty, and the text is quite ample to complete a book of great utility for all members of the profession whether they be specialists or general practitioners.

GENITO-URINARY DIAGNOSIS AND THERAPY FOR UROLOGISTS AND GENERAL PRACTITIONERS. By DR. ERNST PORTNER. Translated and edited by BRANSFORD LEWIS, M.B., B.Sc. Illustrated. Price, \$2.50. St. Louis: C. V. Mosby Company, 1913.

This book sets forth in concise—even terse—terms the best practice in dealing with diseases of the genito-urinary system; but it will attract attention less on that account than by reason of the studies upon “complement fixation” which it contains. This is the first book we remember to have seen giving a full account of the technique employed for the differentiation of the gonococcus from other organisms belonging to allied strains. Every specialist in this department will like to have this clear consideration of the subject.

SYPHILIS AND THE NERVOUS SYSTEM FOR PRACTITIONERS, NEUROLOGISTS, AND SYPHILOLOGISTS. By MAX NONNE. Translated from the second revised and enlarged German edition by CHARLES R. BALL, B.A., M.D. Illustrated. Philadelphia, London, and Montreal: J. B. Lippincott Company, 1913.

The discovery by Schaudinn of the spirochæte pallida, the employment of cytodiagnosis, the globulin examination of the spinal fluid, and the complement-fixation method, all of which have arisen in the past five years, have compelled a rewriting of all the text-books on syphilis. The prognosis has entirely changed, even in cases of tabes and paresis, and for all these reasons Dr. Ball's translation of Nonne's "Syphilis and the Nervous System," with his additions which it contains is timely and welcome. The deliverance of Dr. Nonne upon the use of salvarsan in tabes and paresis diseases of the nervous system is weighty: that salvarsan is of any more value in tabes than mercury has not been proven: the consensus at the present time is that salvarsan is no more of a cure for paresis than mercury and iodide. We predict for this book a large demand.

THE STOMACH AND OESOPHAGUS. A RADIOGRAPHIC STUDY. By A. E. BARCLAY, M.A., M.D., B.C. (Cantab.), M.R.C.S., L.R.C.P. Price, \$2.25 net. Toronto: The Macmillan Company of Canada, Limited, 1913.

For two or three years the journals have had frequent reference by illustration and text to the diagnosis of pathological conditions in the stomach by means of the x-rays; but this is the first complete book we have seen, which deals with the subject to the exclusion of all others. It was presented originally as a thesis for the degree of doctor of medicine at Cambridge in April, 1912; and those who read it suggested that it be published, as it now is. We need only endorse the judgement of those distinguished readers, and commend the book to those who have to do with elucidating the nature of diseases of the stomach.

TEXT-BOOK OF GENERAL PATHOLOGY. Edited by M. S. PEMBREY AND J. RITCHIE. Price, \$4.50. London: Edward Arnold. Toronto: Macmillan Company of Canada, Limited, 1913.

This is one of the amazingly good English books which the Macmillan Company of Canada is publishing in this country, and

will even send to any practitioner free of charge on approval for fifteen days. The editors have been guided by a principle which may be briefly stated, and, indeed, is so stated in the preface. Physiology and pathology had a common starting-point in the doctrine of the cell, and then diverged, the one being occupied with certain junctions of cells, and the other with the observation of results. Within recent years the two have converged and there is at present a constant interaction of these two branches of science. The editors now propose to present the joint results which have been obtained; and physiologists, pathologists, and physicians contribute to the volume. They have performed their task most admirably and have written a book which may be read with interest and profit by every member of the profession.

A TEXT-BOOK ON GONORRHEA AND ITS COMPLICATIONS. By DR. GEORGES LUYA, Paris. Translated and edited by ARTHUR FOERSTER, M.R.C.S., L.R.C.P., London Lock Hospital. Three hundred and eighty-four pages, with 200 illustrations and 3 coloured plates; price, \$4.50. London: Baillière, Tindall and Cox. Toronto: D. T. McAinsh & Co.

This book is a translation of the second edition of "Traité de la Blenorragie" by Dr. Georges Luys, with some slight variations by the translator. Neither author nor translator underestimates the importance of this malady in its effect upon the individual and upon society. They properly insist that it falls within the category of infections with a local incidence but capable of extension to a general septicæmia and cardiac lesions which often are fatal. The introductory chapter gives an interesting account of the history of the disease, and it contains much curious information. The book contains twelve chapters, and no aspect of the case is neglected. It is the completest work upon the subject which is extant in any language.

SURGERY OF THE VASCULAR SYSTEM. By B. M. BERNHEIM, A.B., M.D. Illustrated. Philadelphia and London: J. E. Lipincott Company, 1913.

The writer of this monograph utters a timely warning that the development of blood-vessel surgery should not be impeded by attempts on the part of unskilled operators to practise it, since brilliant laboratory results lure the inexperienced to try their luck, only to find that in surgery chance plays no part. His book is

directed to surgeons who are interested in vascular surgery and possess a fundamental knowledge of the subject. The technique is based upon a perfect asepsis. It was upon that Crile took his stand in 1905, and from it developed his simple method of end-to-end suture. In these few years surgeons have passed on from the treatment of aneurisms to the repair of injured vessels, the transplantation of segments, anastomosis, and the direct transfusion of blood. Of this progress Dr. Bernheim gives an admirably succinct record.

GYNECOLOGICAL DIAGNOSIS AND PATHOLOGY. By A. H. F. BARBOUR, M.D., LL.D., F.R.C.P. Ed., AND B. P. WATSON, M.D., F.R.C.S., Ed. Illustrated with 8 plates and 2 figures; price, \$2.25 net. Edniburgh and London: William Green and Sons, 1913.

The tradition of the Edinburgh school is that the actual specimen shall be studied; it recognizes the distinction between the thing itself and the picture of it. This book is evidence that the authors have carried out that tradition faithfully; and it will be an encouragement to students to follow their example. It is quite possible, however, that the very excellence of the illustrations will be a temptation to the easier path, if the warning is not heeded, that the intention is to furnish a method of study rather than to give a complete account of the various conditions that constitute gynaecological pathology.

APPLIED PATHOLOGY. BEING A GUIDE TO THE APPLICATION OF MODERN PATHOLOGICAL METHODS TO DIAGNOSIS AND TREATMENT. By JULIUS M. BERNSTEIN, M.B. (Lond.), D.P.H. (Camb.), M.R.C.P. Illustrated. Price, \$3.75. London: University of London Press, 1913.

It is not easy to classify this book. It is not intended to be a practical laboratory manual, but is rather a work written from the clinical point of view, in which the practitioner or senior student may obtain a survey of the applications of clinical research. Consequently, all detailed descriptions of technique are omitted except those which have to do with the obtaining of specimens. The book is the outgrowth of the author's lectures at the West London Postgraduate School and has some of the minor defects of the lecture method.

The author takes the view that the position of clinical patho-

logy needs to be more clearly defined, and deprecates the tendency to make of it a speciality no longer intimately associated with and subservient to clinical medicine. Under such circumstances, the clinical pathologists are apt to degenerate into "hewers of paraffin and drawers of blood." The ideal which he has in mind is the training of the scientific practitioner or "physician pathologist." Modern methods of diagnosis and treatment, and the principle underlying them, are clearly explained. There are excellent chapters on bacteriotherapy, on the new chemotherapy, and on the use of tuberculin. The illustrations are good and helpful. It is interesting to note that those showing presence of spirochaetes and other protozoan parasites in the blood are taken from cinematograph films.

THE ELEMENTS OF BACTERIOLOGICAL TECHNIQUE. By J. W. H. EYRE, M.D. Second edition, rewritten and enlarged. Octavo of 518 pages; illustrated. Price, \$3.00 net. Philadelphia and London; W. B. Saunders Company, 1913. Canadian agents: The J. F. Hartz Company, Toronto.

This book is the outcome of the practice in Guy's Hospital. Indeed, one is informed in the preface that the bulk of the matter is an elaboration of the notice distributed to laboratory classes in in practical and applied bacteriology in that school; and the elements of the technique are presented in their logical sequence. Whilst it is quite true that technique can only be acquired by actual work and instruction in the laboratory, a collection of tried and approved methods is not only useful but necessary. The value of a book then depends upon the clearness and fullness with which these methods are set forth. In both of these respects, Dr. Eyre's work fulfils every requirement. The illustrations are worthy of special remark. All of them are clear and many of them are beautiful. As a laboratory guide nothing better could be desired.

DIET IN HEALTH AND DISEASE. By JULIUS FRIEDENWALD, M.D., and JOHN RUHRAH, M.D. Fourth edition, revised and enlarged. Octavo of 857 pages. Price, cloth \$4.00; half morocco \$5.50 net. Philadelphia and London: W. B. Saunders Company, 1913. Canadian agents: The J. F. Hartz Company, Ltd., Toronto.

The appearance of the fourth edition of so well known a book requires little more than mention of the fact that such an edition

has appeared, especially when the book itself has been spoken of on previous occasions, and always with commendation. The alterations are rather extensive. There is a new section on the mechanism of digestion. Fresh tables have been included. Other new subjects are duodenal alimentation, and the use of the soy bean. The subjects of salt metabolism diet in fevers, diabetes, and gout have received fresh consideration. Within the past few years many striking results have been obtained in the laboratory, and the application to clinical practice is fully studied in this book. The chapter on the acid-forming and the base-forming foods is especially important, as recent experiments seem to compel a revision of much that passed for knowledge. The obscure question of carbohydrate tolerance, especially in its relation to the pituitary body, has been much elucidated, and the results receive the prominence they deserve. There is much of historical interest in the book, and it is written with a wide comprehension of the whole subject.

VICIOUS CIRCLES IN DISEASE. By J. B. Hurry, M.A., M.D. (Cantab.). Second and enlarged edition; illustrated. Price, \$2.25 net. Toronto: The Macmillan Company of Canada, Limited, 1913.

The title of this book readily suggests its contents, and the author has shewn industry and skill in arranging his material. The whole field of medicine has been searched for illustration of the dependence of one pathological factor upon another, and the evil results which may follow unless that sequence is severed. The reasoning is acute and leads one to approach many problems by a new path. The book reinforces the Hippocratic maxim, that the whole body sympathizes with every member of the body, and every member with the whole.

Books Received

THE following books have been received, and the courtesy of the publishers in sending them is duly acknowledged. Reviews will be made from time to time of books selected from those which have been received.

THE MODERN TREATMENT OF NERVOUS AND MENTAL DISEASES. By American and British authors. Edited by WILLIAM A. WHITE, M.D., and SMITH ELY JELLIFFE, A.M., M.D., Ph.D. Volume II. Illustrated. Philadelphia and New York: Lea & Febiger, 1913. Toronto: D. T. McAinsh & Company.

THE PLACE OF CLIMATOLOGY IN MEDICINE. THE HYDE LECTURES, 1913. By WILLIAM GORDON, M.A., M.D., F.R.C.P. LOND. Medium 8vo. Pages V-62. Price, 3s. 6d. net. London: H. K. Lewis.

APPLIED PATHOLOGY. BEING A GUIDE TO THE APPLICATION OF MODERN PATHOLOGICAL METHODS TO DIAGNOSIS AND TREATMENT. By JULIUS M. BERNSTEIN, M.B. (Lond.), D.P.H. (Camb.), M.R.C.P. Illustrated. Price, \$3.75. London: University of London Press, 1913.

MALARIA: ETIOLOGY, PATHOLOGY, DIAGNOSIS, PROPHYLAXIS, AND TREATMENT. By Graham E. Henson, M.D. With an introduction by CHARLES C. BASS, M.D. Illustrated. Price, \$2.50 net. St. Louis: C. V. Mosby Company, 1913.

HANDBOOK OF PHYSIOLOGY. By W. D. HALLIBURTON, M.D., LL.D., F.R.C.P., F.R.S. Eleventh edition; illustrated. Price, \$3.00 net. Philadelphia: P. Blakiston's Son & Company, 1913.

OBSTETRICS FOR NURSES. By JOSEPH B. DeLEE, M.D. New (Fourth) edition. Illustrated. Price, \$2.50 net. Philadelphia and London: W. B. Saunders Company, 1913. Canadian agents: The J. F. Hartz Company, Limited, Toronto.

- MANUAL OF OPERATIVE SURGERY. By J. F. BINNIE. Revised and enlarged, with 1,438 illustrations. Price, \$7.00 net. Philadelphia: P. Blakiston's Son & Company, 1913.
- DIET IN HEALTH AND DISEASE. By JULIUS FRIEDENWALD, M.D. AND JOHN RUHRAH, M.D. Fourth edition, revised and enlarged. Price, cloth, \$4.00; half morocco, \$5.50 net. Philadelphia and London: W. B. Saunders Company, 1913. Canadian agents: The J. F. Hartz Company, Limited, Toronto.
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Res Judicatæ

GRAVES' DISEASE

AT the recent annual meeting of the Association a symposium on diseases of the thyroid was held by the combined Sections. The following is the contribution of Dr. Lewellys F. Barker, professor of medicine in the Johns Hopkins University, to the discussion on Graves' disease: Dr. Barker congratulated the Association upon the excellent presentation of the surgical side of the therapy of Graves' disease by Dr. Ochsner. He sympathized with Dr. Hoover's view that Graves' disease can no longer be regarded as a simple, true hyperthyroidism. On the contrary, the evidence is strongly in favour of the view that we have to deal in the disease with a perverted function of the thyroid gland—a so-called dysthyroidismus. The view that we deal with a dysfunction rather than with a simple hyper-function has recently been supported by the experiments of Klose, in which the injection of the expressed juice of the gland from cases of Graves' disease gave rise, in especially susceptible animals (fox-terriers), to symptoms very different from those which follow upon injection of the expressed juice of the normal gland.

Our knowledge of the thyroid gland as a central station in iodine metabolism has, in the recent past, made considerable growth. It would seem that the thyroid besides performing a detoxicating function in removing unmasked iodine of food origin from the circulation, manufactures a peculiar iodine compound (normal thyroiodin) which, liberated in just sufficient quantities, promotes the welfare of the rest of the body; reaching the different organs by way of the blood, this substance is disintegrated in concentrated form in certain specific places which require an iodine influence. In Graves' disease, on the other hand, it would seem that a complex iodine compound differing from the normal one is formed, that this stands closer to inorganic iodine than does normal thyroiodin, and that when given off into the blood, iodine is set free from it in places, and in quantities, other than normal, causing the symptoms which we recognize as the thyro-intoxication of Graves' disease. This abnormally masked iodine body seems to be especially neurotropic, cardiotropic and ovarotropic in its affinities—hence the characteristic symptoms.

When patients are treated by the surgical methods which Dr. Ochsner has described, a large part of the gland producing the abnormal iodine body is removed, and apparently the normal portions of the gland left behind regenerate, so that normal thyroiodin is again produced in larger amounts with reduction of the amount of the abnormal iodine compound formed.

Another feature of Graves' disease to which considerable attention is now being paid is its relation to enlargement of the thymus gland. It would appear that many of the patients who suffer from Graves' disease are "thymus carriers." Not that the enlargement of the thymus is the cause of the Graves' disease; on the contrary, opinion at the moment leans to the view that the dysthyroidism results in an intoxication of the genital glands (testes, ovaries), leading to a hypogenitalismus, that this in turn favours the development of a status thymico-lymphaticus, and that the dysthymismus which is a part of this leads in turn to intoxication of the body, one sign of which is the relative increase of the lymphocytes in the blood. It must be emphasized of course that ideas regarding iodine metabolism and dysthymismus in Basedow's disease are in a state of flux, and that further studies may soon extend or modify the conceptions that prevail at the moment. These conceptions, however, are interesting and stimulating to research.

As to the treatment of Graves' disease by medical or surgical measures, much depends upon the stage of the disease in which the patient is seen and the criteria upon which a diagnosis is made. Dr. Barker is of the opinion that medical men recognize and designate as Graves' disease much earlier stages of the affection than is customary among surgeons. To operate at once upon these early (and often latent) Basedowian states would be, in his opinion, bad practice, though when the symptoms of the disease are outspoken (tachycardia, struma, tremor, exophthalmos, sweating, loss of weight, diarrhoea, etc.), and persist in spite of suitable dietetic-hygienic measures and medical treatment, he strongly favours surgical therapy.

In applying medical measures, Dr. Barker stated that the means used may be briefly summarized as follows: (1) rest; (2) a diet in which meat is somewhat restricted but which otherwise is abundant; (3) applications of small ice-bags to the gland and over the heart; (4) the administration of cacodylate of soda subcutaneously as a general tonic and to slow metabolism, especially in the cases losing weight; (5) the administration of sodium phos-

phate in small doses on rising in the morning and before the evening meal; (6) the regulation of the intestinal functions; and (7) a sojourn in the mountains (2,500 to 5,000 feet).

Another point upon which he was inclined to lay stress is this: just as in early arthritis, so in Graves' disease, he had often found some focus of irritation or infection in some part of the body, and by treatment or removal of this focus he had seen marked improvement in the symptoms of Graves' disease. Among the conditions sometimes associated were mentioned the following: (1) chronic tonsillitis; (2) chronic para-nasal sinusitis, nasal polyps, etc.; (3) pulmonary tuberculosis; (4) chronic appendicitis; (5) gall-stones; (6) uro-genital lesions; (7) pyorrhœa alveolaris, abscess at root of tooth, etc.

In the cases which do not respond well to medical treatment after a fair trial, or in individuals whose necessity for making a livelihood prevents them from satisfactorily resorting to medical measures, he advised surgical operation. Just as important as deciding when to operate, is the choice of the surgeon. He urged general practitioners and internists not to wait too long before turning the case over to the surgeon when the patient did not improve under medical treatment. It is a great mistake to allow the patient's tissues to be intoxicated for years with the thyroid poisons before thyroidectomy, for then too often the organs have suffered so much from the chronic thyro-intoxication that they cannot recuperate after the operation.

He saw no reason for conflict between medical men and surgeons regarding the treatment of Graves' disease. On the contrary, he thought there should be the heartiest coöperation of internists with surgeons in the study and treatment of these cases. On the diagnostic side, in the early therapy, and in the post-operative therapy, the internist can be of the greatest help to the surgeon, while the surgeon of skill and judgment, in turn, by suitable operation, can often secure results which are wholly inaccessible by merely medical means. He called attention to the desirability, at operations on the thyroid, of exploring the thymus at the same time. This can be easily done, without additional skin wound, by way of the jugular fossa. Especially in the cases of marked tachycardia and psychoneurotic disturbance with outspoken lymphocytosis and with only slight struma the thymus should be explored, and, if found large, removed. After removal of the thymus, the lymphocytosis is said to disappear, while if the thymus be not removed, the lymphocytosis remains despite a thyroidectomy.

Obituary

DR. J. R. PATTERSON, of Port Elgin, died on July 29th, at the age of seventy-seven years. Dr. Patterson was a native of Scotland, and settled in Bruce County in the early sixties. He graduated at Queen's University and practised first at Tiverton. Dr. Patterson took keen interest in municipal affairs and also in politics. He retired from active practice some ten years ago.

DR. RODERICK McLENNAN died last July, at Quincy, Maine, in the fifty-fifth year of his age. The cause of death was heart disease. Dr. McLennan was born in Prince Edward Island and graduated from Trinity Medical College. For the past twenty-six years he had practised in Quincy. He leaves a widow and three daughters.

DR. WILLIAM JOHN MCKAY, medical officer of health at Saskatoon, died suddenly in London, August 6th. Dr. McKay obtained a year's leave of absence and was studying at the University Hospital, London. The cause of death is stated to have been pleurisy. Dr. McKay was born in Huntingdon, Que., in 1874. His parents removed to Morden, Manitoba, and he was educated at the Manitoba College and obtained his medical degree from the Manitoba Medical College. He commenced his professional career at Winkler, Manitoba, in 1899, and in 1903 removed to Saskatoon, the next year receiving the appointment of medical officer of health. Dr. McKay was a recognized authority on public health and sanitation and a member of the provincial bureau of public health. He was also a member of the British Medical Association, the Canadian, Saskatchewan, and Saskatoon Medical Associations, the Royal Sanitary Institute, and the American Public Health Association. In short, he was man strong, capable, brilliant, an all-round athlete, whose place will be difficult to fill and whose death is much regretted. He leaves two children, a boy and a girl, each four years old. Mrs. McKay died three years ago.

DR. MULLOY PRESTON, of Galt, Ontario, died August 28th. Dr. Preston was highly esteemed in Galt, where he had practised for forty years.

DR. HUGH MATTHEWSON PATTON, of Montreal, died at Little Metis, September 5th. Dr. Patton was forty-eight years of age and was a graduate of McGill University. He was one of the founders of the Montreal Homeopathic Hospital. He leaves a widow, two daughters and a son.

DR. CHARLES YOUNG MOORE, of Brampton, Ontario, died September 11th, after a long illness, at the age of sixty-six years. He was born at Derry West in 1847 and graduated from Toronto University in 1871, on which occasion he was awarded with the silver medal. For more than than forty-five years he had practised in Brampton where he was medical officer of health. Dr. Moore was a staunch Presbyterian and a Mason; he was keenly interested in educational matters. He leaves a widow and one son.

DR. JOHN MULHERON died at Detroit, August 1st. Dr. Mulheron was born in London, Ontario, in 1846; he was educated in Waterloo, Ontario, and later went to the University of Michigan, where he obtained his degree in medicine. In 1870 he began to practise in Detroit. He became president of the Detroit Gynaecological Society and was a member of the American Medical Association and of the Detroit Medical and Library Association.

DR. JAMES WHITE, of Hamilton, Ontario, died August 17th, in the sixty-fourth year of his age, after a long, active life spent almost exclusively in his native city. He was educated at Bishops College, Lennoxville, Quebec, at Upper Canada College, and at the University of Toronto, where he obtained the degrees of M.A. and M.D. Some little time was spent in Edinburgh and in London doing postgraduate work, after which Dr. White returned to practise in Hamilton. In 1899 he was elected first president of the Hamilton Medical Association. He leaves a widow and three children.

DR. DOUGALD STEWART, of Teeswater, Ontario, died August 22nd. Dr. Stewart, who was sixty-four years of age, was born near Guelph. He has practised at Teeswater for over thirty years and was much respected throughout the district.

News

MARITIME PROVINCES

AN arrangement has been made whereby the Dominion Steel Corporation will build a hospital at Waterford, N.S. When completed, the hospital will be administered by a board of directors, half the members of which will be appointed by the Steel Company and half by the citizens of Waterford: an official referee will be appointed by the Steel Company in case of dispute.

THE report of the Fredericton Hospital for August shows that forty-four patients were treated in the hospital during that month; no death occurred.

AN effort is being made to establish a hospital at Newcastle, N.B. The sum of \$25,000 has been offered to build and equip the hospital, if the city will undertake its future maintenance. An endowment of from \$1,000 to \$5,000 also has been promised. The matter is under consideration.

THE following candidates have been successful in passing the final examinations of the Nova Scotia Provincial Medical Board: Malcolm Robertson Elliot, M.D., Harvard University, of Clarence, Annapolis County; Mary Jane McFall, M.D., Women's Medical College, Philadelphia, of Somerset, King's County; Daniel McNeil, M.D., C.M., Dalhousie University, of Glace Bay; and Frederick Daniel Parker, M.D., C.M., McGill University, of Wolfville.

ONTARIO

TWELVE new private wards have recently been added to the Victoria Hospital at London.

THE new wing which is being added to the Kingston General Hospital is nearly finished. It is hoped that it will be ready for occupation by the end of the year.

A HOSPITAL is to be built at Chapleau. The cost will be about \$15,000.

THE cases of communicable disease reported in the province during the month of August, numbered 700 only. Last year during the same month 20,005 cases were reported. The chief difference lies in the number of cases of typhoid, 259 this year and 1,022 last year. While the small number of cases reported points to an improvement in the general health, it suggests the possibility that the returns may not be quite complete.

At a meeting of the Smith Falls town council, which took place August 11th, \$1,200 was granted to the public hospital and \$800 to the St. Francis Hospital.

FIVE cases of infantile paralysis have occurred at Sudbury. The patients lived in different parts of the town; three were Canadians and two of foreign birth.

THE Brant sanitarium for tuberculosis, which has been erected within a short distance of Brantford, was opened August 2nd. The building is of brick and concrete, absolutely fireproof, and contains space for a dozen beds with ample dining room accommodation. It is the intention to erect several small buildings on the grounds for patients who are in the incipient stages of the disease. The cost of the present building has been about \$23,000.

DURING the eight months ending July 31st, over three thousand cases of measles were reported in Toronto.

A DETERMINED effort is being made to secure a public abattoir in London, in order that the meat may be properly inspected. A resolution to this effect was passed last August.

SEVERAL cases of typhoid have been reported at Fort William. The disease has been prevalent also in Ottawa and in St. Catharines.

THE infant mortality was unusually high in Toronto during the month of August, when six hundred and nine infants succumbed.

A RESOLUTION was adopted at a meeting of the Toronto board of control, held September 10th, granting to the East End Hospital Association the sum of \$100,000 towards a hospital for the east end, provided the Association will contribute an equal amount.

At a recent meeting of the London board of health it was decided to compel the railways, the owners of vacant lots in the city, and the city authorities, to cut down all weeds such as rag weed and golden rod growing in their properties. It is thought probable that the pollen from these weeds is largely responsible for the prevalence of hay fever in the city. On the same occasion it was decided that bakers should be compelled to use tongs in handling bread. In Toronto the bakers are to wear white gloves when handling bread.

At the annual convention of the American Public Health Association, Dr. Hastings, of Toronto, was elected vice-president of the association, chairman of the committee on papers, and vice-chairman of the section on public health.

The regular monthly meeting of the Amasa Wood Hospital was held September 9th. The hospital is greatly overcrowded, forty-two patients being in a space which is only intended to accommodate twenty-five.

Two outbreaks of smallpox have been reported from Collin's Inlet, a lumber camp on the Georgian Bay. Both outbreaks were slight.

SEVERAL cases of typhoid fever have been reported from Wallaceburg.

DURING the past twelve months, four hundred and eighty-two patients were treated in the Victoria Memorial Hospital at North Bay. Thirty-four deaths occurred. Many of the cases treated are brought in from the construction camps in the vicinity. The great difficulty in administration at present is one of finance, as the hospital has a debt of ten thousand dollars.

A LOCAL board of health has been appointed at Ojibway. Dr. J. W. Brien, of Essex, is the medical officer of health.

DR. CATHCART, of Courtright, has been appointed physician to the Indians of the Walpole Inland Reservation.

PROFESSOR CLARENCE STARR, of Toronto, was appointed to the Orthopædic Committee of the International Congress of Medicine which was held in London last August.

It is probable that a ward for measles will be added to the Isolation Hospital in Toronto. A homeless alien, suffering from measles, applied recently for admission to the General Hospital and had to be admitted, there being no provision at present for such cases in the city.

THE governors of the Hamilton City Hospital at a recent meeting agreed that Judge Snider of that city should be asked to make a judicial investigation of the charges that have been made against the hospital.

STEPS have been taken by the civic authorities to secure a site for a psychiatric hospital in Toronto. A house was leased for this purpose some time ago, but owing to objection on the part of the neighbours other arrangements had to be made. The police magistrate was obliged recently to remand five insane persons to the jail, and the present action is the outcome of this.

SEVERAL cases of typhoid have been reported in Hamilton in the vicinity of the Mountain. The outbreak is thought to be due to bad drainage and a shortage of water in the wells; there is no water connection in that part of the city.

At the annual meeting of the American Electro-Therapeutic Association, which took place September 2nd to September 5th, Dr. C. R. Dickson, of Toronto, was reelected a member of the board of trustees.

It is proposed to expend \$100,000 on improvements to the Hamilton General Hospital. Alterations will be made to the laundry, a new morgue built, and the boiler house practically rebuilt. Necessary repairs will be made, but as it is the intention to build a new hospital on the mountain, extensive alterations will not be made to the present building.

QUEBEC

Two hundred and twenty-two cases of smallpox have been reported in Montreal during the present year. Most of the cases occurred during the first three months of the year—fifty-one in March, forty-five in February, and forty-two in January. During the same period over two thousand cases of tuberculosis have been reported.

ACCORDING to the provincial health inspectors, smallpox seems to be disappearing in the provinces. This is attributed to the compulsory vaccination. The number of vaccinations performed this year is more than twice that of last year.

THE corner stone of the new St. Justine Hospital for babies, which is in course of construction at Montreal, was laid September 27th, by His Grace Archbishop Bruchesi. Subscriptions to the building fund amounting to over \$12,000 have been received.

TYPHOID fever has been prevalent in Montreal of late. Several deaths have resulted. There have also been reported several cases of infantile paralysis.

DR. F. J. SHEPHERD, of Montreal, has received the honorary fellowship of the Royal College of Surgeons.

DR. JAMES C. FYSHE, who for the last two years has been medical superintendent of the Montreal General Hospital, has been appointed superintendent of the Edmonton hospitals.

THE fifth annual convention of the Provincial Sanitary Authorities took place at Montreal, on September 16th, 17th and 18th. The meetings were well attended and were presided over by Dr. E. Lachapelle, of Montreal. Dr. E. Pelletier, of Quebec, was appointed vice-president. The following resolution was moved by Dr. Savard, and, after some discussion, the recommendations were adopted: "That the provincial government be asked to contribute to the creation of free dispensaries in the great centres of the province; that a serious educational campaign be immediately started by the district inspectors; that an appeal be made to all the physicians of the province to take part in this educational campaign; and that the medical inspection of schools and industrial establishments be rendered compulsory."

DR. MAUDE ABBOTT, of Montreal, was elected secretary-treasurer of the medical museum at the Seventeenth International Congress of Medicine.

MANITOBA

THE Canadian Conference of Charities and Corrections took place in Winnipeg last month.

THE hospital at Selkirk is to be enlarged. The cost of the proposed addition is estimated at about sixty-five thousand dollars.

A HOSPITAL in North Winnipeg is greatly desired by the citizens. The matter is under discussion and it is probable that an effort will be made to collect an initial sum of \$30,000.

SASKATCHEWAN

THE revised plans have been approved by the hospital board of Saskatoon for the new hospital buildings to be erected at the university. Tenders for the work are to be called for as soon as the necessary funds are available, to ensure that the work should be carried through without interruptions.

DR. LINDSAY, of Yorkton, has been appointed medical officer of health and food and sanitary inspector of that city at a salary of \$800 per annum.

IT is the intention to establish a municipal hospital at Kindersley. The estimated cost is \$25,000. The plans have been prepared for a hospital at Rosetown.

THE estimated cost of the isolation hospital which is to be built at Regina is \$77,600. The building will consist of two storeys and will be of brick with a concrete and stone foundation. The general hospital is also to be enlarged. A building of four storeys is to be added, constructed of brick and stone with brick and concrete foundation. The cost is estimated at eighty-eight thousand dollars.

SPORADIC outbreaks of smallpox have been occurring from time to time throughout the province. As a means of preventing similar outbreaks in the future, an order-in-council has been passed making vaccination and revaccination compulsory throughout a certain area.

THE infectious and contagious diseases reported in the province during the month of August were: typhoid fever, forty-eight cases; diphtheria, twelve cases; scarlet fever, twenty-four cases; measles ten cases; chicken-pox, two cases; tuberculosis, seven

cases. Only two cases of smallpox were reported, but the disease is frequently of so mild a character that in many instances no physician is called in, and it is probable that cases have occurred which have not been reported.

ALBERTA

AN inspection of premises in Edmonton suspected of being unsanitary was made recently by Dr. Whitelaw, the medical officer of health. In one instance a family of nine were found to be living in one room, with only one bed. Two of the children slept in the pantry and three on the floor. In some houses the cellars were converted into sleeping bunks for men, ten being found in one and fourteen in another.

DR. ORR has been appointed medical officer of health at Medicine Hat, to succeed Dr. McBride. The remuneration is \$1,000 per annum.

TYPHOID is extremely prevalent throughout the province. At Regina a temporary hospital has been erected on the grounds of the General Hospital. Some fifty cases of the fever have been reported there.

THE Onoway Hospital was formerly opened on Thursday, August 7th. It has been built in connexion with the Anglican Church, but is intended for all patients, irrespective of creed.

THE plans have been completed for a new hospital at Medicine Hat. It has not yet been decided whether the new building will be placed on the site of the present General Hospital or not. The estimated cost is \$250,000.

THE following cases of infectious disease were reported in Regina during August: scarlatina, 2; whooping cough, 23; tuberculosis, 6; measles, 1; erysipelas, 1; typhoid, 20.

THE following resolution was passed in August by the Union of Alberta Municipalities:

"That we, the members of the Union of Alberta Municipalities (1) urge upon the centres of population, such as Calgary, Edmonton, Macleod, Medicine Hat, Lethbridge, to make proper provision

for the caring of their own advanced cases of tuberculosis; and (2) heartily endorse the plans of the Calgary branch of the Canadian Association for the Prevention of Tuberculosis to have a provincial sanatorium for incipient cases, such sanatorium to be under the management of a provincial board of control; and (3) pledge ourselves to do all in our power, both privately and officially, to have clauses one and two carried out to the full."

The Dominion Government has granted three hundred and twenty acres of land between Radnor and Mitford, on the main line of the Canadian Pacific Railway, on which a sanatorium for incipient cases of tuberculosis is to be placed.

A BY-LAW is to be submitted to the ratepayers of Calgary to provide \$30,000, with which to build a tuberculosis hospital.

BRITISH COLUMBIA

DR. MACPHERSON has been appointed medical superintendent of the Nakusp General Hospital in place of Dr. Mossman who has resigned.

THE plans have been prepared for the proposed new building of the Royal Jubilee Hospital at Victoria. It is the intention to spend between \$450,000 and \$500,000.

Canadian Literature

ORIGINAL CONTRIBUTIONS

Journal de Médecine et de Chirurgie, July, 1913.

La Constante d'Ambard R. Falardeau.

The Canadian Journal of Medicine and Surgery, September, 1913:

A comparison of the hydrotherapeutic meth-
ods at Aix-les-Bains and Virginia Hot
Springs G. Hinsdale.
Anesthetic "Dont's" R. R. Todd.

The Canadian Practitioner and Review, September, 1913:

The examination of sputum in Ontario . . C. D. Parfitt.

The Public Health Journal, August, 1913:

Does vaccination protect? J. Roberts.
The Scope of Sanitary Work in the Home . C. A. Hodgetts.
How can cross-infection be prevented in a
hospital for communicable disease? . M. B. Whyte.
Sanitary work among the foreign popula-
tion C. N. Laurie.

The Public Health Journal, September, 1913:

My personal experience of tuberculosis . M. Marshall.
Some sins against social and sanitary statutes A. P. Reid.

The Western Canada Medical News, July, 1913:

Ileo-sigmoidostomy: its indications and
future E. Hall.

Dominion Medical Monthly, September, 1913:

Advances in Medicine L. K. Hirshberg.

The Canada Lancet, July, 1913:

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| Terminal disinfection in typhoid fever and
diphtheria | G. A. Dickinson. |
| Public health legislation in the province of
Quebec | J. A. Hutchinson. |

The Canada Lancet, August, 1913:

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| The great need of the physicians' active
coöperation in public health work | R. E. Wodehouse. |
| Appendectomy | E. A. Hall. |
| The treatment of cancer by fulguration | J. E. Hett. |
| On the reducing endo-enzyme of internal
respiration. Respiration in animal tis-
sues | Fraser Harris. |

The Canada Lancet, September, 1913:

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| Cæco-sigmoidostomy | E. A. Hall. |
| Anæsthesia and the forceps in labour | A. H. Wright. |
| Some remarks on unresolved pneumonia | J. Newall. |

Medical Societies

THE INTERNATIONAL CONGRESS OF MEDICINE

THE Canadian members of the medical profession who have been attending the International Medical Congress, at a meeting held at the Imperial Institute on Tuesday morning, August 12th, unanimously passed the following resolutions:

Moved by J. T. Fotheringham, Toronto, seconded by J. M. Elder, Montreal:

"That we wish to offer to the president, Sir Thomas Barlow, to the secretary, Dr. W. P. Herringham, and to the whole committee, our hearty congratulations upon the great success which this meeting of the Congress has attained under their kindly and able administration. But particularly as members of the great British family do we desire to express the sense of familiar, homely

intimacy which is felt by all of us, enhanced as it is by the presence of so brilliant a gathering of the savants of other climes and races. For, as Canadians, revisiting the motherland *caelum non animum mutamus*, we deeply appreciate the real significance of the idea expressed by His Royal Highness Prince Arthur of Connaught in his gracious address of welcome, that all of us of the Empire stood together as hosts to all the rest of those attending. We noted with pleasure the repetition of this idea by the president in his address.

"On behalf of the Canadian ladies, we wish to thank the committee of ladies here for the profuse and well-ordered hospitality shown by them, and the many arrangements made for the comfort and entertainment of our wives and daughters.

"And as we part, each to his own work across the seas, we beg to offer to all our kind hosts and friends in London our cordial felicitations, thanks and good wishes."

Moved by Dr. James Third, Kingston, seconded by Dr. R. A. Reeve, Toronto:

"That the thanks of the Canadian Section of the International Medical Congress be tendered Dr. W. H. B. Aikins, Toronto, for his able services as secretary of the Canadian National Committee during seven years and member of the Executive Committee of the Seventeenth International Medical Congress."

Moved by Dr. H. A. Bruce, Toronto, seconded by Dr. H. J. Hamilton, Toronto:

"That the Organizing Committee for Canada for the Eighteenth International Medical Congress to be held in 1917, be constituted as follows: chairman, Dr. W. H. B. Aikins; secretary, Dr. H. B. Anderson; the deans of the medical faculties of the Canadian Medical Association for the years 1916 and 1917, with power to add to their numbers."

ALBERTA MEDICAL ASSOCIATION

THE annual meeting of the Alberta Medical Association took place in Calgary, August 14th and 15th, under the presidency of Dr. G. A. Kennedy. Among the papers read were: "Some remarks on fractures," by Dr. C. E. Smyth, Medicine Hat; "Some points in the differential diagnosis of duodenal ulcer," by Dr. J. S. McEachern, Calgary; "Metastasis in carcinoma of the breast," by Dr. W. E. Beggs, Edmonton; "Surgery of the thyroid," by Dr. Neil

McPhatter, Calgary; Hospital plans," by Dr. D. G. Revell, Edmonton; "Intestinal perforation in typhoid," by Dr. Clark, Calgary; "Frontal sinus infection—a case," by Dr. H. Orr, Medicine Hat; "Ectopic gestation," by Dr. Birch, Calgary.

The officers of the association are: president, Dr. G. A. Kennedy; first vice-president, Dr. C. E. Smyth; second vice-president, Dr. Parsons; third vice-president, Dr. Stevenson; fourth vice-president, Dr. Archer; secretary-treasurer, Dr. A. McNally, Lethbridge.

MONTREAL MEDICO-CHIRURGICAL SOCIETY

THE fourteenth regular meeting of the society was held Friday evening, April 18th, 1913, Dr. D. F. Gurd in the chair.

LIVING CASES: 1. Cerebellar Encephalitis, by Dr. Gordon S. Mundie.

The boy is four years of age. He was taken ill in January, 1911, and brought to the Royal Victoria Hospital in December complaining of inability to walk.

History: The child went out to play one morning perfectly well and at ten o'clock his mother noticed that he was throwing his legs around in a peculiar manner; at twelve noon he could not walk at all. Next morning at six he started to vomit and was sick most of the morning and again in the evening; it was noticed that his arms shook a great deal. He vomited off and on for six or seven weeks. The Sunday following the first attack he became worse, his whole body shaking, the eyes twitching and his speech was almost lost; he could only say a few words. He had not been able to walk alone since the attack and has been unable to feed himself. He is quite clean in his habits and not very irritable. He is the only child in the family; had measles at eighteen months. Father and mother both alive and well; no miscarriages.

When examined on December 9th he appeared well nourished, but did not look bright; sits with back bent and head doubled up; has poor colour, seems rather dull and speaks in a slow monotonous manner, pronouncing words slowly but correctly. Cranial nerves normal; no nystagmus; no paralysis at all; in motor system no paralysis. In doing the finger-to-nose test there was considerable incoördination, the same thing was noticed in doing the heel-to-knee test. Sensory examination apparently negative—pain, pin-

prick, touch, heat, cold—negative. Reflexes—arm, abdominal, epigastrics, knee jerks, ankle jerks, normal—no Babinsky, no clonus. Unable to stand alone, walks with assistance but throws his legs about.

The diagnosis rested between hysteria or some cerebellar disease. From the age of the patient and the definite incoördination a diagnosis of probable acute poliomyelitis of the cerebellar type was made. It was decided that medicine would be of no use at all so we managed to get a lady interested in kindergarten work who goes down twice a week to the boy's home, and who gives him exercises, takes him for walks, etc., and now although the child is still unable to walk alone he is able to stand alone and is much better in every way, especially in his eating, and his speech is much improved although still slow and monotonous.

2. Hyperidrosis, by Dr. A. Howard Pirie.

Dr. Pirie exhibited a case of extreme perspiration of the hands which had been treated with *x*-rays. The parts of the hands treated were perfectly dry while the untreated portions perspired freely. This hyperidrosis is not just ordinary perspiration of a person who gets hot, but it goes on all day long and only ceases at night. Seven years ago while treating a patient with the *x*-rays for a tuberculous condition Dr. Pirie noticed that after the condition had healed the part treated did not perspire. It was then tried in this condition of excessive perspiration with excellent result.

DISCUSSION. Dr. D. F. Gurd: I know of a case of an architect where one side of the face is affected with this condition of excessive sweating and it was thought that he had some unusual terminations of the parotid gland; another case was over the thenar region and a very great nuisance.

Dr. K. Cameron: I would like to ask Dr. Pirie if he ever treated a case of bromidrosis.

Dr. McKee, Boston: In a good many cases of excessive sweating, particularly in the arm pits of women, it is accompanied by excessive odour and this is due, partly or largely, to an excessive secretion of the sebaceous glands and also to a peculiar odour in the sweat itself. The majority of the cases come from the arm pits and there is very excessive sweating. If this is treated the bromidrosis disappears. Dermatologists are pretty well agreed that there is no successful treatment outside of *x*-rays. Knowing that *x*-rays could produce atrophy of the sebaceous glands, I tried some years ago to produce atrophy of the sweat glands for hyperi-

drosis, but failed as the cases were either under treated or over treated. I have come to Montreal to learn Dr. Pirie's technique as success lies only in the giving of enough and no more, as we have proved by experience. This is also the case with ring-worm of the scalp in which Dr. Pirie has had such success with the x-rays, the dosage must be exact.

PATHOLOGICAL SPECIMENS: Series by Dr. C. C. Gruner.

1. Heart showing typical bread-and-butter exudate on the pericardium, from a case of empyema which had been existing for three months following pneumonia; organism found was pneumococcus.

2. Tumour of the bladder. Patient had been ill four months with symptoms of enlarged prostate, difficulty of micturition and occasional hæmaturia. Mass filled up whole of bladder, was very soft and had all the appearances of a malignant tumour. Microscopically mass appeared to be organized blood clot with one small piece of white tissue, rather solid and not pulpy.

3. Intussusception in colon in splenic flexure; annular constriction at seat of invagination; gangrenous enteritis of cæcum.

DISCUSSION. Dr. A. E. Garrow: The specimen of intussusception was from a patient who came under my care a week ago. He was admitted under Dr. McCrae in a condition of collapse, subnormal temperature, very rapid pulse, distended abdomen and pronounced toxic condition. There was a history of two weeks illness, but symptomatology difficult to obtain; apparently passed some blood two or three days prior to coming to hospital and no movement of bowels for eleven days. On opening abdomen there was enormous distension of small intestine requiring two or three enterostomies to empty bowel. In order to drain obstructed area and facilitate resection of bowel a colostomy was done on right side. This was done forty-eight hours after admission and after washing out stomach several times it looked as if he were going to improve when this extensive gangrenous colitis developed.

PAPER. The paper of the evening was read by Dr. W. G. Turner on the treatment of Pott's disease. (See page 852.)

DISCUSSION. Dr. J. Alex Hutchison: I have had an opportunity of seeing Dr. Albee's specimens, both the dead bone specimens and the living cases and I was very much impressed with the work. I saw cases of active tubercular disease in quite small children walking about the ward who had been carried in only a few weeks before with the characteristic symptoms which Dr.

Turner enumerated. I was surprised to know that such daring surgery could be done in the presence of so much disease.

Dr. A. H. Pirie: It has been a great pleasure to watch this case of Dr. Turner's in which you see the callus passing from the graft to the spinous process; there is no doubt that the callus is well formed. Dr. Turner referred to the light area of the heart behind the dorsal region. One case at the hospital puzzled me. I thought it was an aneurysm but from the clinical standpoint it was evidently a tuberculous process. The patient has had a graft put in and I believe is doing well.

Dr. A. E. Garrow: I would like to ask Dr. Turner if he has any explanation to offer for the development of this bridge of new bone growing from the end of the graft into the crest of the vertebra above. It opens up some thought in connexion with the development of bone. Murphy is very strongly in favour of the view that if you have no framework for the development of bone between the split vertebra and the graft, bone does not grow; whereas in the picture one sees a bony bridge developing through the gap in which there is no bone splint presenting. Dr. Turner spoke of the wisdom of postponing operation in young children until six or seven years of age. I had the pleasure, like Dr. Hutchison, of seeing Albee's cases and some of those going round the wards were but three or four years old and undoubtedly doing as well as the others.

Dr. Hingston: I saw Dr. Albee perform two or three of his operations and the difficult point was the removing of the bone from the tibia. I would like to know if Dr. Turner used a motor saw or whether he was able to chisel it out and if the operation with the chisel was at all easy. As regards cases with pressure symptoms I would like to know what Dr. Turner's opinion is of using extension and weights to the head and legs after putting a patient in a plaster cast, and especially when the symptoms are acute; also what Dr. Turner thinks of the Calot jacket with the opening cut opposite the deformity and pressure applied there once a week or every two weeks when the pad is removed and a larger one put in its place.

Dr. Turner: In reply to Dr. Hingston I would say that the operation is really not a difficult one and I have tried both the saw and the chisel and I must say the chisel is more easy than the saw. Albee himself uses the saw. About the pressure signs, paraplegia, I have not used extension since the first year I came home. The cases we have had have not really required it, the hyperextension and absolute rest have cleared up the signs. I have

seen the double extension quite frequently and it has good results in some hands. The Calot jacket I have not used since the first year he brought it out. The original Calot operation is not surgical at all, that is, forcible correction and breaking down the hump.

CASE REPORT: Retinitis Pigmentosa, by Dr. Hanford McKee.

THE fifteenth regular meeting of the society was held Friday evening, May 2nd, 1913, Dr. D. J. Evans, president, in the chair.

PATHOLOGICAL SPECIMENS: Series by Dr. A. M. Burgess.

1. Kidney. The two kidneys weighed 150 grams. From a man aged twenty-four; typical small, granular, chronic interstitial nephritis. The interesting point was the man's youth. He had a history of disease of both kidneys at seven years of age.

2. Kidney showing a large stag-horn calculus, the entire pelvis filled with the concretion.

3. Gas bacillus liver. Caused by infection with *B. ærogenes capsulatus*. This originated in the uterus, a septic condition following delivery and the invasion of the liver and the general circulation by the *B. ærogenes capsulatus* following a general peritonitis. Probably invasion occurred just before death.

4. Right temporal lobe and part of occipital lobe of brain. On examination over temporal lobe convolutions very markedly widened; with this exception no apparent difference from ordinary tissues of brain. This is one of those gliomata of the brain which are very poorly marked off from the surrounding brain substance. The history was not suggestive: had a fall three weeks before coming to hospital and symptoms pointed to something traumatic, but this had nothing to do with it, and the tumour was the whole cause of the symptoms.

5. Carcinoma of œsophagus with extension to larynx and with a carcinoma which lay just behind the cardiac end of the stomach. It is a secondary carcinoma which has pushed its way into the lumen of the stomach; it always pushes the intact lumen ahead of it. It is secondary to the fungating ulcerative tumour in the œsophagus. In the larynx extending up to the right side of the epiglottis and down over one arytenoid cartilage there is a definite growth which is no doubt an extension.

6. A mass removed from the breast of a young Italian boy nineteen years of age. The breast was as big as two fists and looked like a very active lactating breast; it was firm. Besides the breast the arm showed a very interesting condition; it was very large,

extending from the wrist to the breast. The growth did not at all involve the skin; it was apparently nodular, rather resiliant on palpation, and had given him no symptoms except that he complained that the weight of the arm and the breast got in his way; his muscles were all right. He was sent into hospital by Dr. Shepherd, who saw him five years ago, with several distinct nodules on the inside of his arm. The diagnosis cinically was multiple neuro-fibromata, von Recklinghausen's disease. The specimen shows a stringy-looking mass very much like varicose veins. On section these masses were gelatinous and rather translucent. Dr. Burgess illustrated the case with slides of the sections.

CASE REPORT: Metastatic gonorrhoeal keratitis and iritis. By Dr. Hanford McKee.

DISCUSSION: Dr. G. H. Mathewson: Speaking of the different degrees of severity of the conjunctivitis, I do not think any of those cases one sees can be mistaken for the kind you get when the conjunctiva is directly infected; it looks beefy and cheesy, and there is not very much secretion. The keratitis is a rare condition. In cases I have seen where there was iritis, the internal administration of the iodide seemed to have a very beneficial effect.

PAPERS: 1. The Gibson Charts in the diagnosis and prognosis of acute abdominal conditions, by Dr. Fraser B. Gurd.

2. Insanity, its relation to the State; prevention and treatment, by Dr. Colin K. Russel.

DISCUSSION: Dr. Haig Sims: There are two points in this last paper which I should like to speak of. None of us can help realizing the great necessity for the hospital which Dr. Russel advocates, but there seems to me to be one difficulty which will be even greater than that of obtaining funds; I speak of the obtaining of a properly trained staff. The average hospital trained nurse is completely ignorant in the matter of caring for the insane and the average institution attendant is generally very unreliable and an uncertain factor. There are a number of precautions, apparently minor ones, that need to be taken in an institution of this kind, such as keeping under lock and key all razors, knives, and matches, etc., counting all utensils for eating, and the enumeration of all marks or bruises on the body of the patient at admission, the omission of which at any moment may cause serious trouble for the hospital; and unless house men have changed very much lately, I do not think it would be easy to find a man who would realise sufficiently the necessary vigilance to be employed constantly, who would understand that every melancholic is a potential

suicide, especially during convalescence, and that a patient suffering from dementia præcox can commit more kinds of dangerous and destructive mischief in five minutes than a sane person could conceive in a week. Again, in regard to treatment, the house man has not the opportunity of obtaining the special knowledge necessary for the treatment of these cases, more especially in regard to such matters as tube feeding. It is a simple thing to pass a tube into the stomach of a sane patient; the same procedure in the insane is a very different matter. With reference to all these things, I simply wish to emphasize the fact that I think it would be advisable that all nurses in the general-hospital training schools in this city should receive some instruction in the care of the insane, and it would be a very necessary thing for this projected hospital to have a trained institution man in charge as resident officer. Another thing is that there are a number of cases of the very acute insanities in which the earlier treatment is begun, the greater are the chances of recovery. At the present time it is a common thing for patients to be brought into hospitals for the insane with the intestines loaded with scybalæ, the bladder distended with urine, and the skin, mouth, and tongue very dry for lack of food and water and the use of hypnotics. In these cases very much can be done for the patient at once, while waiting for the commitment to the hospital for the insane. I do not wish to decry the use of drugs at all. The crises of paranoia can be very often quieted by apomorphine, and I know of nothing which controls the disturbed episodes of pre-senile delusional insanity so well as hyoscyamus and chloral. Still the acute insanities which are treated for a long time by hyoscine and morphine do not seem to be treated always in the right way. The main indication there is to remove the toxins. Of course, when mechanical restraint was abolished, it was replaced by drug restraint, and that again has been superseded by prolonged tubing. My point then is that it is possible in the short time before committing our patients, to commence the prolonged tubing in the patient's home, and in very many of these cases we can hasten recovery by this means.

Dr. J. G. Adami: I think that everyone here will agree that Dr. Russel has brought up a matter of very great importance, that of having an institution here where these early cases could be treated and kept under observation and really saved from themselves and saved for their families and the community. These institutions are in Boston and elsewhere, and there is a demand for such an institution in this city. I noticed the other day an account of

what they have in Glasgow, namely, in their general hospitals they have observation wards, wards in which they do not accept cases which have a homicidal tendency, and patients with dementia præcox are sent away at once; but there are a very great many cases of doubt where they can well be brought under observation in the ward. Twenty beds female and twenty beds male, in one of our big hospitals here, would afford very great service and save many cases of temporary excitement, alcoholic cases, and early cases of other unsoundness from going to the asylum. After such a ward had been in operation for some time, its value would be established and a special hospital would be the natural result. As far as I can understand, cases of suicidal mania and acute insanities are not intended to be treated here, the cases for the psychopathic clinic are the early cases and the hopeful cases, nursed by careful means back again to complete sanity and made into serviceable members of the community. It is for that reason that we certainly need some institution of this kind in Montreal.

Dr. D. J. Evans: There certainly is a great need for some step in this direction. Any man who is in active general practice is constantly worried and harrassed by these cases which try one's patience in the extreme; it is difficult to get an environment that will make in the slightest degree for recovery, and to leave such a person in this condition with relatives and friends, is doing everything that is just wrong. There is an urgent need for some place for the treatment of these incipient cases. Montreal may not be in a position to put up a million dollar institution for this purpose, but some step should be taken in the direction of providing accommodation for these doubtful cases and giving them a chance for recovery. In this province we cannot by law take a person who is said to be of unsound mind, even to the most limited extent, out of the province, and if, on the other hand, we fulfil the law and allow the person who is mentally unbalanced from tribulation or worry to remain, we have to take them to a public institution and thus stigmatise them as lunatic in order to have them admitted. That stigma is one that no medical man will lightly place on his fellow man, and a patient must be in a serious condition before he is willing to take the responsibility of designating a person by that name; thus the physician is greatly handicapped by the condition of things as they exist in this province. It is the duty of this society to take up this matter and endeavour to have such an institution established for the treatment of these unfortunates.

Dr. C. K. Russel: In this psychopathic hospital which I sug-

gested, it is not intended in the slightest degree to compete with the present asylums. I have talked this matter over with Dr. Burgess and Dr. Porteous, and they are very keen about it. They realize that it is a great want in Montreal, and are eager to go ahead with it in any way possible. I would not suggest that we take in cases that are in any way advanced, only cases which are recognised as curable or from which something can be learnt by study and investigation. The study of insanity has always been approached from the wrong end. With a diseased heart and kidney, you can study the signs present, and then, at autopsy, you can find the cause; but with the mind they have always studied the normal brain and tried to make out its mechanisms. It is only recently that Jung and Freud have worked in from the pathological point and studied the functions of the organ from the pathological evidence during life. They have attained something; they have been able to teach us a new psychology and give us a new understanding of mental diseases. The subject is only in its infancy, but it will amount to something, and that very shortly. But in the meantime these patients are missing the opportunity that they might have, and we are missing the opportunity of studying them.

THE sixteenth regular meeting of the society was held Friday evening, May 16th, 1913, Dr. D. J. Evans, president, in the chair.

LIVING CASE: McReynold's operation for pterygium, exhibited by Dr. W. G. M. Byers.

The treatment of pterygium has been notoriously unsatisfactory. The multiplicity of operations in our text-books is the best proof of this fact. Carried out with the most scrupulous care, the various procedures introduced for this condition have been followed by relapses, to the chargin of the surgeon and with damage to the eye of the patient. The case I show to-night is an example of an operation which has been very satisfactory in my hands, and has been very generally commended, especially in America. It was introduced by McReynolds, of Texas, and is a modification of an operation performed by Desmarres in 1855. Briefly, it consists in dissecting up the pterygium and burying it beneath the conjunctiva of the globe below the cornea. In this way the growth is deflected so that any progress made by the vessels will be in a direction where they will do no harm; and, at the same time, the tissues above are made to cover the denuded portion of the globe that is

left bare by the incision, and by the removal of the vascular portion of the pterygium.

Although it is now barely three weeks since I operated on this man for a growth of considerable size, it is hardly possible to notice anything strange in the appearance of the eye.

PATHOLOGICAL SPECIMENS: Series of ductless gland specimens exhibited by Dr. E. J. Mullally.

Some time ago we had, at the Royal Victoria Hospital, an autopsy on a case of acromegaly which was very interesting, and in order to show the abnormal development that occurred in the pituitary and thyroid, I thought it might be of interest to show a specimen of the normal pituitary, weighing $\frac{1}{2}$ gram. It consists, as you know, of two lobes, a posterior and anterior. The posterior lobe is composed of modified neuroglia tissue and has certain peculiar physiological actions, one of the most important of which is that when solutions of the lobe are injected into the body, a continuous and prolonged rise in the blood pressure takes place. Another action is on the uterine muscle, and a third is upon the mammary secretion. All of these actions rise from the injection of the posterior lobe. The anterior lobe gives no such results; it is purely glandular in structure, consisting of two main types of cells. The type of cell found in the condition known as acromegaly is distinctly basophilic in reaction.

This second pituitary was removed from a case of acromegaly; it weighed fifteen or twenty times more than the normal, and consists almost entirely of basophilic cells. The patient was a French Canadian woman, aged sixty-five years, who had symptoms of acromegaly for upwards of five or ten years. An interesting feature in connection with the case was the abnormal enlargement of the ductless glands, particularly the thyroid and adrenals, whilst there was almost complete atrophy of the ovary.

The third specimen is the thyroid removed from the same subject. It is cut through here and there to show the adenomatous development occurring in the substance of the thyroid. The patient had during life certain symptoms of myxœdema, great roughness of the skin, and a growth of hair over the entire body. The thyroid gland was found weighing more than ten times the normal and on section found to be adenomatous, with fibrous tissue development and calcareous degeneration here and there.

Two other specimens of thyroids are presented for your inspection, one removed from a child of fifteen years, who had had symptoms referable to the thyroid for three years previous to operation.

It consists almost entirely of a colloid goitre. She had certain symptoms of hyperthyroidism: irritability, extreme nervousness, and frequent attacks of palpitation of the heart. The second thyroid is the right lobe from a woman aged fifty-five, who had had symptoms referable to the thyroid for one year previous to operation. The symptoms were those of exophthalmic goitre: pronounced bulging of the eyes, extreme irritability and nervousness, frequent attacks of diarrhoea, tremor of the hands and palpitation. There is a marked macroscopical and microscopical difference in the two specimens; the last consists of extensive hypertrophy whereas the other consists of a colloid degeneration of the gland. The two are interesting by way of contrast.

CASE REPORT: Some thoracic cases illustrating the value of the skiagram, by Drs. C.F. Martin and D. S. Lewis.

Dr. G. H. Mathewson: In connexion with diagnosis in these doubtful cases, I may say that in an examination of the eyes we have found in several cases miliary tuberculosis of the choroid.

PAPER: The paper of the evening was read by Dr. G. H. Mathewson on mastoid disease.

DISCUSSION: Dr. H. S. Birkett: I am sure the members of this society must be very much indebted to Dr. Mathewson for presenting a subject of this kind before the minds of the members. At the present time the condition is sadly neglected and cases are brought to the aurist in such an advanced stage that a first year student should be able to recognise the disease. The recognition of early mastoid infection demands that the general practitioner shall have a fair amount of knowledge of the subject, and there are certain points that have occurred to me which I thought might be touched upon. In the first place, in these days where students are taught so much laboratory work, it is very little trouble for the general practitioner, for instance, to make a differential blood count, and this to my mind is a very essential feature as an indication of involvement of the mastoid, where the leucocyte count is very much increased and the polymorphs usually extending up to 80 per cent. Where the discharge has continued for a longer time than four weeks, it bespeaks undoubtedly involvement of the mastoid, even though there be no tenderness or even swelling of the mastoid, for the presence of such a large quantity of discharge does not bespeak the simple involvement of the tympanum itself but the extension of the suppurative process directly through to the adjoining cells. If we examine the drum head and find that after a paracentesis it still remains bulging or pouting, it is evident

that there is a definite swelling of the mucous membrane, causing such a local condition and acting as a stasis or blocking of the pus from the adjacent mastoid cells. As to the tenderness of the mastoid, in the three points mentioned the tip, in my experience, is almost as frequent as any of the spots; and this can be demonstrated very early by the simple little method of turning the head directly to the side opposite to the ear involved, thus pressing upon the periosteum. Now the slightest pressure will very often elicit tenderness, while if it is tried with the head straight forward from the body, no result is obtained. Again, I believe in early operation for this reason, that it is the means of accomplishing what is very essential in all these mastoid cases, the preservation of the hearing. If these cases are allowed to run for six or eight weeks, the chances are for fairly normal hearing but very much diminished. Early operation does no harm to the patient or to the structure operated upon and it is the means of establishing more perfect drainage and enables one to retain better hearing than if postponed for several weeks. As to local treatment, I have found that aspiration will accomplish a great deal; a fairly free opening and aspiration of pus will often bring about healing which would not be accomplished by syringing and the Politzer air bag. This latter has practically been relegated to the past, I believe, for unless you have a very patent opening, it is often the means of forcing infecting material into the antrum. Of course in centres where we have the opportunity of applying the *x*-rays, we have a reliable means of recognising the early infection of the mastoid process itself. It does not supplant the clinical means of diagnosis; it is only one of the aids which in one hand has proved very useful.

Dr. G. H. Mathewson: As regards Dr. Birkett's remark about the leucocyte count, I must say I have given it up; in cases where I was in doubt, it did not seem to give much help. As far as the *x*-rays go, they have to be done exceedingly well to give one a plate from which you can make an absolute diagnosis, and it seems to me that when you have inflammation, you have as good a shadow as when you have pus, and that makes a difference in the treatment. With Dr. Peters I am forced to agree, that in these epidemics of measles we see a great many cases of middle ear trouble in spite of all our care, especially if the epidemic is a severe one. With little children you can do very little, but with older people you can do much. In children over ten years, a great deal can be done to cure these cases of otitis media, and even prevent them, but with younger children but little can be done.

THE seventeenth regular meeting of the society was held Friday evening, June 6th, 1913, Dr. D. J. Evans, president, in the chair.

PATHOLOGICAL SPECIMENS: Series by Dr. W. G. Hepburn.

1. Piece of brain showing exudate on surface; no fracture of skull. Patient died from septic meningitis.

2. Annular carcinoma of the rectum with involvement of the retroperitoneal glands; the liver weighed 6,370 grams and showed uniform enlargement.

3. Tumour involving corpus callosum. It was a glioma of the soft type and contained considerable hæmorrhage but no capsule.

With reference to the first case, we only had the patient in hospital three days; on admission the temperature was 103 but fell the next morning as low as 99, then gradually rose to 107 2-5, and on this rise we made a diagnosis of probable cerebral abscess. The microscopical sections of the liver showed, so far as we have seen, only carcinoma and, so far as we could find out, no cirrhosis. The supraclavicular glands have not yet been examined for the presence of disease.

CASE REPORTS: 1. Case of pyloric stenosis by Drs. Geo. Shanks and W. L. Barlow. Dr. Shanks read the case report which was illustrated by Dr. Pirie with lantern slides.

DISCUSSION: Dr. A. E. Garrow: I should like to know if any microscopical or histological examination has been made of the part removed.

Dr. Shanks: The small amount of tissue snipped away was not used for microscopical examination.

2. Spleno-medullary leukæmia, by Dr. C. A. Peters.

DISCUSSION: Dr. A. H. Pirie: May I ask if anyone has treated this condition from the standpoint of a parasite in the blood and has used salvarsan, and with what result? It is well known that in many x-ray workers the white blood corpuscles are found to be below the normal.

Dr. C. A. Peters: I have no knowledge of any such work.

3. Pancreatitis of the infective type, by Dr. A. E. Garrow.

LAMBTON COUNTY MEDICAL ASSOCIATION

THE last regular meeting of the Lambton County Medical Association was held in the General Hospital, Sarnia, on July 9th, 1913, on which occasion a large number of the medical men

of the county were present. The meeting was of a surgical and clinical nature. Operations were performed by Dr. McDonald and Dr. Logie, of Sarnia, and some very interesting cases were presented by Dr. Henderson, Dr. Bradly, and Dr. McDonald. The next meeting will be held in Forest in October.

FRASER VALLEY MEDICAL SOCIETY

THE Fraser Valley Medical Society was organized at a meeting which took place at New Westminster on August 28th. The object of the society is to keep the members in closer touch with one another and to afford opportunities for discussion on subjects of interest to the profession. The officers of the society are: president, Dr. DeWolfe Smith; vice-president, Dr. A. A. King, Ladner; treasurer, Dr. A. L. McQuarrie; secretary, Dr. D. F. Carswell; executive committee, Drs. R. E. Walker, G. E. Drew, and E. J. Rothwell.

CALGARY MEDICAL SOCIETY

A MEETING of the Calgary Medical Society was held in the Carnegie Library on Thursday evening, June 10th, when the following officers were elected for the year 1913-1914: president, Dr. T. J. Costello; vice-president, Dr. G. R. Johnson; secretary, Dr. E. B. Roach; executive committee, Drs. McEachern, Madden, and H. Johnson.